Clinical Lecture ON WHOOPING-COUGH.

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(*Concluded from page* 661.)

I CANNOT discover any published narratives describing the precise mode in which whooping-cough spreads, not as an epidemic, but when imported from a distance by the introduction into a healthy locality of an infected child. The popular belief (by no means to be neglected) would seem to be, as I have said, that its contagion is far-reaching and irresistible. This is so common an opinion that, although mothers do not underrate the dangers of whooping-cough, isolation is seldom attempted. Medical men who believe most stedfastly in the conveyance of the affection by a material agent are often equally positive in asserting that no precautions, such as its material nature would suggest, are practically efficient to ward it off. Accurate observations on this point on a sufficiently large scale are sorely needed. The experience of the Hospital for Sick Children,* such as it is, tends to show that the spreading is not from bed to bed, but from one spot to another. It does not travel in steps in a given direction, but hops about hither and thither, so that within a certain area, *cæteris paribus*, all the individuals included are equally liable to it. The child in the next cot to whooping-cough is not more dangerously situated than the child furthest removed, or even than a child in the neighbouring ward.

In this, as in other respects, therefore, whooping-cough seems out of the rule of those diseases which it partially resembles. No single category can compass it. In its nervous relations it is consistent and uniform; but, looking further, it becomes anomalous and surprising in that property of contagion which, to some extent, it seems to share with diseases of a totally different character. We must either accept this position, and make a special place for whooping-cough, or we must adopt some view of its contagion and of its single occurrence which shall be exclusive of any theory of specific poison, and in conformity with its nervous associations.

What can be made out of whooping-cough on this latter hypothesis? May it not be infectious, not like scarlatina or measles, but like fear or pity or discontent? It would, at least, be difficult to say how far contagion in that sense enters into the history of nervous affections, and quite misleading arbitrarily to limit the operation of that principle by calling it imitation, conscious or unconscious. Imitation is an attempt to resemble: "unconscious attempt" is a confusion of words. Let us consider the phenomena themselves, rather than reduce their significance by inadequate expression. How cough is contagious, so that in a multitude, however absorbed, the coughing of one will impress the rest, no one who goes to church need be told. It is the same with yawning and with laughter. Similarly, nervous diseases are not imitated merely; they are conveyed. The girl in presence of hysteria does not imitate it; she gets it. The child in the same ward with chorea does not attempt to resemble choreal movements; she gets the disease chorea. There are some notable instances where epilepsy has been caught in the same way. "Catching a habit" is a proverbial expression, and applies in a special manner to early childhood; but the full force of the principle which it illustrates in its further application to disease is hardly sufficiently admitted.

Some facts of whooping-cough which tend to bring it within the operation of this law have been already incidentally mentioned. The disease spreads, not by contact, or absolute propinquity, but to the children about and within hearing. You cannot isolate it. Mere infants, liable enough to whooping-cough, and with a conformation admirably adapted for its reception, are yet irreceptive of it from others. Thus, the baby will either escape the family complaint altogether, or take it late, when by long persistence the impression it makes has forced itself upon its dull perceptions. Meanwhile, the elder children will have the disease strictly in company. The whooping of one will be a signal for the rest, and the whole will cough in chorus.

It would be fanciful and absurd to ascribe the wide dissemination of whooping-cough mainly to the operation of this principle of conveyed nervous impression, but it is neither the one nor the other to suppose that this influence co-operates with others to impart to whooping-cough a seeming likeness to zymotic diseases. An affection to which all young children are liable under *any* circumstances, and which, like the catarrh so intimately associated with it, is very apt to be epidemic, needs no more than this property of nervous contagion to earn the character which whooping-cough has maintained since the days of Cullen. On the other hand, if whooping-cough is quite independent of this form of contagion, it is the only disease of the kind that is so. There is no affection with a voluntary element about it, whether chorea, or hysteria, or the act of yawning, that does not spread, more or less, by involuntary repetition. Considering the impressibility of the female sex, and the strong "imitative" instinct of young children, we should be led to believe that in a nervous disease proper to childhood, and commonest with girls, the influence of nervous contagion should be not absent but conspicuous. I might add that those who would reject this view, preferring that of a specific poison, will yet maintain, with Dr. Babington, that when this poison is spent "mere habit will perpetuate what first originated in disease." If the whooping-cough spasm can thus be reduced to a habit, it is probable that, like other habits, it may be originally excited in a predisposed person by involuntary imitation (so to call it) of another.

But there is a further difficulty. Whooping-cough, like measles and scarlatina, happens but once. It is here, you may say, dissimilar alike to nervous and to respiratory diseases. Both of these are apt to become chronic, and easily acquire the habit of recurrence. We must observe, however, that there is no intimate likeness between the non-recurrence of certain zymotic diseases and the non-recurrence of whooping-cough. Strictly speaking, whooping-cough is very apt to recur. Every nurse will tell you that this is the great trouble and worry of the complaint. The whoop will appear and disappear. So long as bronchial catarrh endures no interval of freedom will make its return improbable. You are never sure that you have done with it until the lungs are quite free, and the cough is gone. This is not like scarlatina or measles—it is strikingly unlike them. There is no such thing as the repetition of the distinctive features of a specific fever within a very short period from the first attack. The protection conferred is, for the time, absolute. In its habit of receding and advancing whooping-cough is true to the pattern of nervous diseases; it is quite inconsistent with the orderly course and progress of all infectious fevers whatsoever.

But why should children, although they may whoop on and off indefinitely during a single catarrhal attack, have in their lives but a single bout, so to speak, of whooping-cough? Why should whooping with the catarrh of this year secure the patient against whooping with the precisely similar catarrh of next year? Here, too, I believe that the nervous hypothesis is competent to explain the facts, and that whooping-cough does but illustrate the common law in relation to this class of affections. Recurrence is the rule of all nervous disease, but the recurrence is not by way of exact repetition. We do not cease to suffer from the cradle to the grave, only the manner changes. As the child grows he becomes exposed in turn to all the phases of nervous disorder. There is a fixed time and duration for each—a duration which, inasmuch as it corresponds with certain epochs of life, will be longer or shorter accordingly. Thus the period of dormant infancy is followed by that of dentition, a short and tumultuous time, covering some twenty months, of most active development, and subject to peculiar incidents. To this succeeds an interval of about ten years of comparative calm, interrupted only by the approach of

* The new hospital in Great Ormond-street contains a ward specially devoted to whooping-cough. We are thus, for the first time, provided with a means of studying this obscure disease accurately and continuously.

puberty. Nervous lesions correspond accurately with these transitions: each has its turn and its proper duration accordingly. That chorea should recur and whooping-cough not is not really anomalous. Recurrence is common to both, but the period allotted for the one is longer than for the other. The human subject continues prone to whooping-cough hardly more than two years. "More than half the cases," says my distinguished colleague, Dr. West, "occur before three years." He continues prone to chorea for five times that period. There is nothing that whooping-cough confers which prevents its return in the future, only when that future arrives the child has outgrown its proclivity: it has discharged its obligation in this respect, or rather it has changed the nature of its liabilities. On the other hand, the longer period allotted to chorea (commencing accurately at the time of life when whooping-cough begins to decline, and becoming more intractable as puberty is neared) admits of the exhibition of that quality of recurrence which is one of its marked characteristics.

But observe, further, that this liability or proneness to whooping-cough, which, when the whole race is considered, is comprehended within a very short period, must be still further limited for each individual. When it is said, for instance, that, for all children whatever, a special liability to whooping-cough is compassed between two years old and six, it is implied that the individual liability falls somewhere between these extremes. Varying with the rate of development, one child, or one group of children, will encounter the liability at two, another at three, and so on. Hence the fact of a child getting whooping-cough but once will be due to the fact that this single attack covers, or nearly covers, the whole period of its special liability in this respect.*

Why, then, you will say, does the disease, once introduced, run through the whole family, attacking children at various ages indifferently in the absence of any epidemic or other common cause? I would answer that it is not the common rule of whooping-cough to behave so. It usually spares, not only the elder children, but one or two of the younger ones also, both those that have suffered before and one or two besides. It spares, that is to say (or rather, it is likely to spare), both those with whom the period of special liability is overpast, whether they have discharged the debt or escaped it, and those, too, who have not yet reached it. The fact that a child has had whooping-cough is the best evidence that it has passed its liable time. For the others we may not arbitrarily fix this period. It will vary within due limits with the rate of development, as the period of dentition and the advent of puberty vary.

But I may not pursue the subject further to-day, nor should I have been justified in detaining you so long but for the plea that the pathology of whooping-cough is admittedly a vexed question. The many practical issues involved will easily suggest themselves to your own minds. If, for instance, whooping-cough has at all the relations I would claim for it, not only would certain obvious precautions suffice in the absence of a common cause to prevent its spread, but that method of treatment by change of habit and residence and associations, so admirably described by the late Dr. Salter in his work upon Asthma, and epitomised by the French phrase "profoundly modifying the situation," should be as effectual in whooping-cough as in the disease so intimately allied with it.

The conclusions to be deduced from what has been said would be something as follows:—

1. Whooping-cough is a nervous disease of immature life, due immediately, like nervous asthma, to a morbid exaltation of sensibility of the bronchial mucous membrane. Although possible in a modified form at all ages, it has its period of special liability and full development simultaneously with that time of life when the nervous system is irritable and the mechanism of respiration diaphragmatic. A child of the proper age with catarrh and cough is thus on the very brink of whooping-cough. A large proportion of such children will develop the disease for themselves upon casual provocation, all contagion and all epidemic influence apart.

2. The whoop of whooping-cough is due to a spasmodic contraction of the diaphragm which follows its extreme relaxation with the emptying of the lungs by spasmodic cough, the force of the inrush of air being met by a conservative spasm on the part of the glottis.

3. The natural history and relations of whooping-cough—its uneven course, indeterminate duration, method of recovery and cure, frequent absence of pyrexia, and seasons of prevalence—are in striking contrast with diseases of the zymotic class. Admitting the fact of its contagion, the great commonness of the disease and its association with epidemic catarrh, coupled with the popular belief that its source of infection may be indefinitely remote, are circumstances which must combine to render whooping-cough more contagious in appearance than it is in fact.

4. In its character as a purely nervous disease whooping-cough may very well be contagious like other nervous affections of a quasi-voluntary kind. The assumption of a specific morbid poison is both hypothetical and gratuitous, or so nearly gratuitous that the facts it seems to explain are insufficient to counterbalance its inherent improbability.

5. The non-recurrence of whooping-cough is not, in strictness, analogous to the non-recurrence of contagious fevers, nor out of real harmony with the pattern of nervous disease. It is the rule that affections of this class alter their shape with the successive epochs of life, so that each will appear either solitary or recurrent, according as the time allotted for it is shorter or longer. The after-infancy period to which whooping-cough attaches is one of brief duration and special liabilities. The features of the disease are in strict correspondence with the characteristics of its time of life.

6. The specific remedies for whooping-cough (which have their season and may be said now to include all drugs whatever of any potency) have all of them a certain testimony in their favour. They agree in a single point: whether by their nauseousness, the grievous method of their application, or the disturbance they bring to the child's habits and surroundings, the best vaunted remedies—emetics, sponging of the larynx, ill-flavoured inhalation, change of scene, beating with the rod,—all are calculated to impress the patient, and find their use accordingly.

* It would have been out of place in this lecture to allude to Dr. Liveing's admirable remarks on Nervestorm, yet his views seem strictly applicable here. The notion of accumulation and discharge may be fitly applied to explain that period of immunity which follows whooping-cough, and, for the time, "protects" the child, so to speak, from a second attack.—See Dr. R. Liveing on Megrim, chap. v.

ON GELSEMINUM SEMPERVIRENS.

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(*Continued from p. 663.*)

INFLUENCE ON THE EYES.

In one of our experiments we noticed that the eyes of a rabbit became very prominent after poisoning with the liquid extract of gelseminum. On another occasion we dropped into the eye of a rabbit a solution of the alkaloid prepared by Mr. Gerrard, containing one grain in twenty minims of water, when, to our surprise, the animal died of asphyxia, from absorption of the poison. In this animal, too, the eyes became very prominent, especially the one into which the poison had been dropped. We six times verified this last experiment.

We then dropped the alkaloid solution into the eye of a cat, repeating the application five times in an hour and a half. But though we caused the pupil to dilate widely, still we produced no general effects, whence it appears either that the conjunctiva of cats absorbs less actively than that of rabbits, or that the drug affects rabbits more easily than cats. We believe that rabbits are more susceptible than cats, for we put a large quantity into a cat's eye, causing a free discharge from the eyes and nose, which no doubt washed away much of the alkaloid, though enough remained to dilate the pupil widely. Moreover the cat licked its lips, and must thus have swallowed the washed-away alkaloid; yet, in spite of this, the animal remained

unaffected. At the end of two hours we injected into the subcutaneous tissue of the back, in two places, thirty minims of the liquid extract, and in eighteen minutes respiration began to be affected. Though prior to this symptom we had noticed that both eyes were prominent, especially the one operated on, as asphyxia progressed the eyes grew more and more prominent and staring, the poisoned eye always bulging most.

As death from gelseminum is due to asphyxia, we thought that possibly the prominence of the eyes was due to congestion of the orbit forcing out the eyeballs. To ascertain the effects of asphyxia we injected into the subcutaneous tissue of the axilla of a rabbit weighing 1930 grammes six grains of chloral, and having rendered the animal insensible, we then exposed the trachea, and, by means of a pair of forceps, produced gradual fatal asphyxia, and the eyeballs were unaffected by the experiment.

We next tried a different way of producing asphyxia. After making a rabbit insensible by the subcutaneous injection of six grains of chloral into the connective tissue of the axilla, we laid bare the trachea, and introduced a glass cannula. Connecting it with an elastic bag so as to allow the animal to expire into, and inspire out of, this receptacle, thus producing a modified slow asphyxia without mechanical arrest of the respiratory movement, we produced asphyxia on three occasions, in six, seven, and nine minutes respectively. Twice, when the animal had ceased breathing, we restored respiration artificially, but on the third occasion we allowed it to die. At the very climax of the asphyxia, during the last few gasps, the eyes became a little prominent, but the slight bulging soon subsided on restoring the animal. The prominence showed far less than under gelseminum poisoning, and came on much later; under the poison, indeed, the prominence occurs before asphyxia sets in, and becomes marked as soon as this commences.

Moreover, the following experiment conclusively shows that the bulging is not due to asphyxia. We chloralised an animal to insensibility, then opened the trachea, introduced a cannula, and, having injected thirty minims of the liquid extract under the skin, the eyes soon grew prominent, growing more so as the paralysis became general, though the artificial respiration prevented any asphyxia, as evidenced by the mucous membrane of the lips and mouth maintaining its natural colour.

Therefore we conclude that the bulging after poisoning by gelseminum is due, if at all, only in a slight degree to the state of asphyxia. If not due to asphyxia, then the bulging must be referable to paralysis of the orbital muscles, induced by gelseminum; still the congestion due to the asphyxia may exercise a certain slight influence. Thus the recti and other muscles are paralysed by the effect of the gelseminum on the nervous system, but this of itself would not be sufficient to account for the prominence of the eyeballs. Could the congestion from asphyxia produce the protrusion of the eyes after the paralysis? To ascertain the validity of this view, we injected into the loose subcutaneous tissue of the axilla of a rabbit weighing 1885 grammes a solution containing six grains of chloral, and when the animal became unconscious, we laid bare the trachea, made into it a V-shaped incision, and introduced a glass cannula, so that when required we could promptly employ artificial respiration. Then we dropped into the right eye three drops of the solution of the gelseminum alkaloid; as in a quarter of an hour it had produced no effect, we introduced two more drops, and in five minutes two more, and soon after this third dose we noticed that the right pupil was a little larger than the left, and the right eyeball a little more prominent than the left; whilst at this time evidence of slight general paralysis simultaneously set in, and the breathing became a little affected. As respiration became more affected both eyes stood out prominent and staring, especially the right, whilst the right pupil grew much larger than the left, even double its size. On making the animal struggle, and thereby increasing the congestion of the head, the eyes became very prominent; then, after a few seconds' quiet, the eyes again receded into the sockets. Soon the asphyxia caused convulsions, when both eyes became very prominent, the right much the more so; and now both pupils were widely dilated, especially the right. When respiration had quite ceased, we performed artificial respiration, and as the lividity of the lips, tongue, and mucous membrane of the mouth grew less the eyeballs again partially receded, but the right still continued the most prominent. We then stopped artificial respiration, and the animal not having recovered from the effects of the drug, respiration was very languidly performed, and at last ceased, and again asphyxia ensued. The eyeballs grew prominent, and became especially so on the occurrence of convulsions, the right eye bulging much more than the left. On resuming artificial respiration, the eyeballs again receded. We several times allowed asphyxia to ensue, always with the effect of inducing great prominence of the eyeballs, especially of the right. The effect of the gelseminum and of the asphyxia respectively was well exemplified in this wise. On looking down over the head of the poisoned animal, we noticed first that the right eye was a little more prominent, though both eyeballs were concealed by the upper eyelids. When asphyxia appeared the eyeballs became visible beyond the eyelids, and bulged very prominently as the asphyxia advanced and convulsions ensued, the right ball being always the most prominent. On employing artificial respiration the eyeballs again gradually receded into their sockets till they became once more concealed by the upper eyelids. We several times repeated this observation.

We have seen that simple asphyxia will cause very little prominence of the eyeballs, therefore most of the bulging must be due to the gelseminum; still, as the prominence was most marked when the asphyxia was at its height, and disappeared when the asphyxia declined, it is evident that this condition played a part in the production of the bulging. The following, we believe, is the true explanation. Gelseminum paralyses the muscles of the eyeballs, and hence the eyeballs become a little more prominent; asphyxia supervenes, causes congestion of the head and then of the orbit, and as the muscles of this part are more or less paralysed, the congestion of the vessels forces out the eyeball. Convulsions increase the congestion, and so contribute to the prominence of the eyes. Artificial respiration removes the congestion, and the eyeballs regain their natural position.

The influence of congestion on the prominence of the eyeballs is shown in the following way:—On poisoning a rabbit with gelseminum the eyes as usual became prominent after asphyxia had set in, and on cutting the throat immediately after death, as the blood flowed freely, lessening the congestion of the brain, the eyes fell back into their usual position in their sockets. Again, during the stage of prominence the eyeballs recede a little during inspiration and again protrude during expiration. During inspiration, blood is drawn into the chest, thus lessening the cerebral congestion, and at the same time the eyes fall in a little; whilst during expiration, the blood accumulates in the head, the orbits become more congested, and the eyes more prominent.

Where the poisoning was slow, or where death from asphyxia was prevented by artificial respiration, we found that a time arrived when the eyes either did not become prominent, or but little so, even after struggling, although the respiration was very languid. At this time the heart's beats were very much reduced in force and frequency, and were irregular and intermittent. Hence the circulation was feeble, and little blood being propelled, there would consequently be but little congestion from asphyxia, struggling, or convulsions, and thus the eyes would not become so prominent as when the heart beat vigorously.

Is this paralysis of the muscles of the eyeball part of the general paralysis, or are these muscles early and especially affected? We believe that the poison has an especial action on the eye muscles: for—(1) In man the eye is the first part attacked; (2) the prominence of the poisoned eye takes place before any general paralysis occurs; (3) when the eyes were very prominent, the animal could still quickly shut its eyelids, showing at least that the motor muscles of the eyeball are affected before and to a greater extent than the orbicular muscle.

Does the poison affect the muscles of the eye, the nerves supplying them, or the centre of these nerves? The muscles themselves are not affected, for after death by poisoning we find that under galvanic stimulation they will contract as energetically as the muscles of an unpoisoned animal. We believe the nerves are affected, and we found this opinion on the fact that the eye to which the poison has been applied protrudes first, and is always the most promi-

nent. If the poison were absorbed and acted on the centre of the motor nerves of the eye, both eyeballs would be equally affected; but, on the contrary, as we have said, the poisoned eye always bulges more than the other, whence we conclude that it is probable gelseminum poisons the terminations of the motor nerves of the eye, though the centre of these nerves may be also affected.

We tried to ascertain if the nerves of the poisoned eye were more depressed than those of its fellow. Immediately after death we opened the skull, removed the brain, exposed the third nerve leading to each orbit, and applied electricity. Each nerve, so far as we could ascertain, conducted the current; hence the paralysis was far from complete, and there seemed no marked difference between their conductibility. This experiment is very difficult to manage, and is not very trustworthy; for the nerves of warm-blooded animals, after death, soon cease to conduct impressions, and they are quickly exhausted by electricity. Moreover, we should not expect to find any decided, or perhaps any detectable, difference between the two nerves, since both were paralysed, both eyes being prominent, though the poisoned eye bulged most. Again, as sufficient poison was taken up to paralyse the respiratory centre, enough was likewise absorbed to paralyse the nerves of the opposite eye; hence we could hardly expect any obvious difference in the conductibility of the two nerves.

The interesting effects from the local application to the rabbit's eye led us (skilfully helped by Mr. Pearse on this as on many other occasions) to try the drug on two men. We dropped into the eye of each patient two drops of the alkaloid solution every hour for eight hours. The pupils in an hour and a half became very widely dilated. After the fourth application, one man complained of slight frontal headache and some giddiness, subsequent doses being followed by slight temporary frontal headache. In spite of this prolonged action we failed to produce any decided prominence of the poisoned eye. Several who saw the man thought the trial eye was a little the more prominent, but we were at the best doubtful on this point. We produced no paralysis of the muscles, as shown by the absence of diplopia, and the poisoned eye moved in every direction as well as its fellow. The man suffered from a violent cough, and during a paroxysm his face became much congested; yet even then the poisoned eye did not protrude. Thus we did not get any topical action on the terminations of the third nerve, though in each case the absorption of the poison was made manifest by the widely dilated pupil, and the giddiness and headache which seized the patient.

These experiments prove that gelseminum partially paralyses the nerves of the orbits, affecting the terminations before the trunks of the nerves; and our observations on man further show that it paralyses the sixth nerve first, for the external rectus is weakened before the other muscles, and that afterwards it affects the third nerve, for the inward, upward, and downward movements of the eye are impaired, and ptosis is often marked.

(To be continued.)

ON BORACIC ACID AS AN ORDINARY DRESSING FOR WOUNDS.

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THE use of boracic acid and the different preparations containing it has been introduced as part of the antiseptic system, and its advantages have been well dwelt upon by Professor Lister, Mr. Godlee, and others (see THE LANCET, May 17th and 24th, 1873). But it is as a *simple* dressing for wounds of all kinds, altogether apart from the antiseptic system, strictly so called, that I wish to draw attention to it.

However great the advantages of Mr. Lister's method of dressing wounds, it is undoubtedly felt by the great majority of surgeons, especially those engaged in private practice and whose time is often limited, that the details and the time required for their proper performance, *practically* prevent its use in all ordinary cases. In hospital practice, where skilled assistance is always at hand, and in the higher class of purely surgical practice, I believe that the antiseptic mode of dressing wounds is by far the best. But we want something which, while it has to a certain extent the merits, yet is without those tedious details, and which can readily be performed by anyone without assistance.

The preparations of boracic acid have now been rather extensively tried by me for some months, and in all the cases in which they have been used the results have been good, and decidedly better than under the ordinary methods of dressing. The most convenient forms for use are the boracic (boric) lint and cotton wool, a concentrated watery solution of the acid, and boracic ointment. Boracic lint is prepared by soaking lint in a saturated *boiling* solution of the acid. On drying the lint a copious deposit of fine flaky crystals takes place between its fibres. Cotton wool may be similarly served, and when dried and carefully picked out forms a very useful dressing. The concentrated solution is made by dissolving the acid in boiling water to saturation. The ointment is made by rubbing down one drachm of the acid with one ounce of simple ointment, or benzoated lard.

Boracic acid, unlike most antiseptic agents, is bland and unirritating; and, whilst its non-volatility renders it less useful in some cases than carbolic acid, its great superiority to this and to chloride of zinc resides in its unirritating nature. The boracic lint is best used as a dry dressing, and for recent wounds where simplicity is desired it has no equal. A pad of lint applied immediately over the wound, and kept in place by pieces of strapping, is all that is required, and union by first intention is a common result.

The following cases will illustrate its application to this kind of wound.

An elderly gentleman was drawing the cork of a wine-bottle and applying considerable force when the shoulder of the bottle broke in his hand, and he received a jagged wound obliquely across the palm of the left hand, extending from the ulnar side of the wrist to the cleft between the thumb and forefinger. Considerable bleeding took place and several small arteries were wounded, but the hæmorrhage was temporarily stopped by tightly binding up the hand and wrist. The wound was gently bathed with some boracic lotion and brought together by three silver-wire sutures. A long pad of boracic lint, about four folds thick, was then placed over the wound and firmly strapped down by plaster. The whole hand was then firmly bandaged. On the third day the pad was removed. There had been some bleeding; there was very little swelling of the hand, and no offensive smell to be detected. On taking off the pad the wound was seen to have united at its extremities, where it was more cleanly cut, and at the deepest and most irregular part it was looking healthy. There was a little suppuration, but no odour of putrefaction. The stitches were taken out and the hand dressed as before. On the sixth day the dressings were again undone, and the wound was then found to have entirely healed except about half an inch of its length, which had become superficial and was covered with a whitish glairy discharge; there was no fetor or evident suppuration. The dressings were reapplied, and on the ninth day were removed altogether, the wound having completely healed, leaving a firm cicatrix. This case illustrates the simplicity of the method, for with a severe wound, four inches long, nothing further was required than three simple dressings.

J. B——, aged twenty, labourer, was knocked down by the wheel of a thrashing machine and received a severe wound on the outer side of the left knee, part of the wheel passing over the side of the knee. On examination I found a contused wound, the surface of which was almost reduced to a pulp, and measuring about two inches across in any direction, whilst in the centre it was half an inch deep. There was some swelling of the knee-joint, which had come on very rapidly, but beyond this no injury to the joint itself could be detected. The trousers over the knee had been torn, and the wound was very dirty. It was not bleeding to any extent. I first washed out the wound with some boracic lotion, pouring it form a height in a gentle stream, so as to remove the particles of dirt, &c., then applied a pad of boracic lint several folds thick, and placing a splint behind the knee to keep it at rest, firmly fixed the whole with a bandage. On the following day the dressings were removed. There had been a great amount of discharge, and the dressings were soaked with it. The discharge consisted of pus and débris from the wound, and was decidedly putrefactive. There was considerable inflammation round the wound, and the knee was swollen and so painful that the

patient could not sleep. The wound was well washed out with boracic lotion, and the pad applied as before. Dressings taken off next day; swelling, pain, and redness less marked; discharge still profuse, but no longer fetid. Dressed as before. For the next three days the wound was dressed daily and made steady progress; after this at intervals of three days for a fortnight, during which it granulated and cicatrised, forming a good cicatrix. For the latter part of the time the patient dressed the wound himself, simply applying a piece of boracic lint.

In cases of phlegmonous erysipelas, where sloughing takes place, the boracic lotion appears to have a very beneficial effect, and to stop further spread of the mischief. The following case illustrates its use.

A. M——, aged fifty-six, female, who had suffered from ulcers on the leg some years previously, was taken suddenly ill with rigors, vomiting, and fever, without any apparent cause beyond "catching cold." She lived in the country; had not been where there was any illness, and had not received any wound or injury. She took to her bed at once, and complained of severe pain on the outer side of the left instep and up the calf of the leg. In the course of a few hours the leg swelled to a great extent, and was intensely painful. Patient became delirious, and her temperature and pulse ran up quickly. The leg soon became brilliantly red and extremely painful and tender. On the third day the swelling about the foot felt "boggy," but there was no fluctuation to indicate any circumscribed collection of matter. Large blebs formed on the surface of the instep and ankle. The next day a patch, five inches long by two and a half inches broad, appeared on the outer side of the foot, paler than the surrounding skin, of a yellowish marbled colour, and evidently about to slough. No deep fluctuation could be found anywhere, and it was not thought advisable to make any incisions. The skin over the patch gave way on the following day, and the sloughing process appeared to be rapidly extending. The whole leg was very much inflamed and swollen, and red lines, following the course of the lymphatics, were seen on the thigh. Up to the present time the chief treatment had been fomentations to the leg, while nourishment in every available shape was given to the woman. The erysipelatous state appearing to spread, and a large slough having made its appearance on the inner side of the foot just below the ankle, the whole leg and foot were ordered to be bathed at frequent intervals with a warm solution of boracic acid, and the foot to be kept constantly wrapped in linen cloths wetted with the same. Liberal support, with quinine and perchloride of iron, to be continued as before. The next day there was some improvement: the inflamed lymphatics upon the thigh were less tender; the redness of the foot and leg had somewhat diminished; the sloughing had not extended. Dressed as before. In the course of the next two days the swelling of the leg and foot decreased; the large slough on the outer side of the foot became surrounded by a line of demarcation and began to separate. No extension of the disease had taken place, and the patient had decidedly improved in her general symptoms. The sloughs separated in the course of a week, leaving a large surface about one-third of an inch deep, which suppurated freely, but was without any odour of putrefaction. Patient expressed herself as greatly relieved by the lotion, and said that during the night, if not dressed for a few hours, it became much more painful. From this time the large wounds gradually, and without any interruption, healed. The granulations were healthy and the discharge comparatively slight. The whole of both wounds cicatrised well, and patient entirely recovered the use of her limb, though with some stiffness.

In this case the effect of the antiseptic on the spread of the erysipelatous inflammation was very evident, and the whole progress of the case fully bore out the advantages which were expected from the boracic acid.

As a simple dressing for old ulcers of the leg the boracic lotion and lint are cleanly, and the healing processes go on favourably under its use, sometimes succeeding when other applications have failed.

J. G——, aged thirty-six, had large deep ulcers which followed her confinement two years ago. They were situated on the inner side of the ankle and below the knee. She was ordered to rest her leg up, and was given liberal diet; whilst the wounds were dressed with sulphate-of-zinc lotion ("red wash") for some weeks. Under this treatment they improved slowly, but not very satisfactorily. The dressings became fetid occasionally from neglect, and for some weeks the ulcers got better and worse alternately. The ulcers were accordingly well washed with boracic lotion every morning, and afterwards covered with boracic lint. Under this treatment a marked change occurred; the ulcers became clean, lost all their fetor, and were completely healed in three weeks' time.

In skin-grafting the boracic acid is very useful. I have found the following plan answer best:—The surface to which it is intended to apply the grafts is first well cleaned by applying the boracic lotion for some days, till the discharge is perfectly free from putrefactive odour. The skin from which it is intended to take the grafts is also well washed with the lotion. Small portions of the skin are then removed, and applied to the raw surface in the usual way. I then protect the grafts by a strip of gutta-percha tissue dipped in the boracic lotion, and over all apply a piece of boracic lint. Under this plan the grafting is very successful, and gives very little trouble. The following case will illustrate the method:—

A. P——, aged thirty-six, domestic servant, applied on account of a large varicose ulcer on the leg. The ulcer was of old standing, and had broken out and healed over several times before. When first seen it measured about two inches in all directions. It had raised and indurated edges. The floor of the ulcer was dark purple, and the granulations were unhealthy. The skin round the ulcer was dark and congested. Patient had worn a bandage for some time, and could apply it evenly. The ulcer was first well washed with boracic lotion, covered with boracic lint, and then the leg was well strapped from the ankle to above the ulcer. Patient was given some boracic lotion, with orders to remove the strapping after three days, and then apply linen rags twice a day wet with the lotion. At the expiration of a fortnight she came again. The wound was much healthier in appearance. The edges were reduced and less prominent. The granulations were redder, and the discharge less, and quite inodorous. Five grafts were now applied to the ulcer, the skin being taken from the woman's arm, and the whole dressed as described above. When next seen (ten days afterwards) the wound had lessened in size to the diameter of an inch. Three of the grafts had grown considerably, and one had joined the edge of the ulcer. The wound looked healthy, though patient had been obliged to walk about considerably. There was now very little pain. She continued to apply the lotion once a day, and the wound completely healed in a short time.

This case shows how little trouble the dressing gives. After the grafts were applied the patient had to walk away from my residence. She was unable to rest up, and could only apply the lotion once a day. Yet with this little attention it made steady progress, and patient was more free from pain than she had been for months.

For boils on the neck and elsewhere the boracic lint is an excellent application; a piece large enough to hide the boil, and covered with a piece of gutta-percha tissue, often gives great relief. For carbuncles and other cases in which it is desired to apply a poultice, I have found the new "instantaneous poultice," prepared from Iceland moss by Messrs. Rigollot, a capital and efficient remedy. The poultice should be prepared by soaking it for a short time in the boracic lotion, and when applied should be covered with gutta-percha tissue.

Lastly, in some of the vegetable parasitic diseases, such as pityriasis versicolor, tinea circinata, &c., the boracic lotion and ointment will often be found serviceable.

Briefly to sum up the advantages of boracic acid:—

1. It is an *antiseptic which does not irritate and inflame*, and so allows the natural processes of healing to go on without much interruption.

2. It is exceedingly *simple* in its application, and can be used apart from all the details required by a thoroughly antiseptic method.

3. It can be used in the shape of the lint, lotion, cotton-wool, &c., in combination with most other methods of treatment.

4. Its *cost is trifling*; and though this is of secondary importance, it is a feature of the treatment which will recommend its employment in workhouse infirmaries and in dispensary and parish practice.

Peterborough.

THE INFLUENCE OF THE TURKISH BATH ON RESPIRATION.

BY JOHN CHARLES BUCKNILL, M.D., F.R.S.

I HAVE recently observed a remarkable change which takes place in the relative activity of the cutaneous and respiratory functions during profuse sweating caused by the Turkish bath, which appears to me to have an important bearing on therapeutics, and which I desire to make known in order that other observers, with better means at their disposal than I possess, may be led to pursue the investigation.

My observations were made only on one subject, a man of fifty-eight years of age, with a weak heart. On four occasions I found his pulse, before entering the bath after exercise, to be 70, and his respiration 18. After remaining five minutes in the bath at 160° F. the pulse was 80, and the respiration 21; but after remaining twenty minutes in the bath, when profuse perspiration had been induced, the pulse was 100, and the respiration 12, and this rate continued until leaving the bath ten minutes later. After washing and cooling for thirty minutes, the pulse had again sunk to 65, while the respiration had risen to 18. I have asked my friend Dr. Duckworth Williams, of the Sussex County Asylum, to verify these facts, which he has kindly done upon six patients, the details of observations upon whom I append.

Excluding the sixth observation, in which the respiratory movement of the patient became so slight that it could not be counted, and omitting small decimals, it will be seen that in the five remaining cases before the bath the mean of the pulse was 92, and the mean of the respiration 20·6.

During the free perspiration caused by the bath the mean of the pulse rose to 108, while the mean of the respiration fell to 16·4.

After washing and cooling, the pulse fell to a mean of 83, and the respiration rose to a mean of 21.

The small effect upon the bodily temperature of an air-bath of 175° is to be remarked, only raising it, on the average, 1·7°. This is the more curious since animals whose cutaneous function has been stopped by varnishing rapidly lose their heat.

Before the bath the mean ratio of pulse to respiration (20·6 : 92) corresponds very closely to that of health, which, as stated in THE LANCET of April 22nd, has been fixed by Jürgensen at 2 : 9 or 20 : 90.

During the free perspiration caused by the bath, the mean of the pulse ratio changed from 20·6 : 92 (say 20 : 90) to 13½ : 90.

After the cooling process the change in the mean of the pulse-respiration ratio was still greater, being 21 : 83.

Is the whole of this change attributable to the well-known vicarious function of the skin to that of the lungs?

Dr. Williams writes me that he "was much struck by the diminution of the respiratory murmur after sweating had set in."

I trust that some one will carry this inquiry further by means of the spirometer.

No. 1.—Admitted with recurrent mania. Is now convalescent, and in good bodily health. Temperature of bath 175°; was in fifteen minutes. Skin acted freely. In the habit of having Turkish baths.—Observations before bath: Pulse 80; temperature 98°; respiration 21, and respiratory murmur loud. When skin was acting freely: Pulse 100; temperature 99·6°; respiration 17; respiratory murmur indistinct. After a wash, cold douche, &c.: Pulse 76; temperature 98·2°; respiration 20; and respiratory murmur again strong.

No. 2.—Admitted with melancholia. Is now convalescent, and in very good bodily health. Temperature of bath 180°; was in twenty minutes. Skin acted very freely.—Observations before bath: Pulse 84; temperature 98·4°; respiration 18; respiratory murmur loud. After skin had acted freely: Pulse 100; respiration 16; respiratory murmur indistinct; temperature 100°.—After a wash, cold douche, &c.: Pulse 80; respiration 20; respiratory murmur loud; temperature 98°.

No. 3.—Admitted with recurrent mania. Has now a lucid interval, and is in robust health. Has regularly had the bath for years. Temperature of bath 175°; was in twenty minutes.—Observations before bath: Pulse 76; temperature 98·7°; respiration 20; very strong respiratory murmur. Observations when skin had acted freely: Pulse 100; respiration 15; respiratory murmur slight; temperature 99·8°. After a wash, cold douche, &c.: Pulse 80; temperature 98·4°; respiration 20; respiratory murmur again strong.

No. 4.—Admitted with strong suicidal impulse and refusal of food. Is now convalescent, and has been treated with the Turkish bath. In good bodily health. Temperature of bath 175°; was in twenty minutes.—Observations before bath: Pulse 120, evidently from nervousness; respiration 20, murmur fairly loud; temperature 98·5°. When skin had acted freely: Pulse 120; temperature 100°; respiration 16, murmur barely perceptible. After a wash, douche, &c.: Pulse 100; temperature 98·7°; respiration 20; murmur still indistinct.

No. 5.—A case of chronic dementia in good bodily health, and has frequently had the bath. Temperature of bath 175°; was in thirty minutes.—Observations before bath: Pulse 100; temperature 98·6°; respiration 24; murmur loud and irregular. When skin had acted freely: Pulse 120; temperature 101°; respiration 18; murmur indistinct. After a wash, douche, &c.: Pulse 80; temperature 97·9°; respiration 24.

No. 6.—A case of dementia in good bodily health. Had not taken a Turkish bath before. Temperature of bath 170°; was in thirty minutes.—Observations before bath: Pulse 80; temperature 98·5°; respiration 16; murmur plainly audible. When perspiration was profuse: Pulse 60, was a little faint; temperature 99·5°; respiration so slight that it could not be counted. After washing, douche, &c.: Pulse 100; temperature 98°; respiration 24.

TETANUS FOLLOWING THE HYPODERMIC INJECTION OF QUININE IN MALARIOUS FEVERS.

BY H. P. ROBERTS, M.B.,
SURGEON H.M. 9TH REGIMENT N.I.

CASE 1.—Private Gopal Gowra was admitted to hospital on Oct. 15th, 1875. He was suffering from quotidian ague, and he had had three attacks before admission. He received a hypodermic injection of three and a half grains of the neutral sulphate of quinine, but the fever recurred during the day. On the morning of the 16th he received another injection, and after that no attack of fever occurred, and on the 18th he was discharged, and returned to duty.

With reference to the hypodermic injection of quinine, I may mention that I was at this time comparing the results of this method with the administration of the sulphate of chinchonidine by the mouth. The solution I used was one of eight grains to the drachm of water, and was injected at a temperature of 100° F. The point of the needle of the syringe was inserted on the outer surface of the biceps muscle, about half way between the elbow and shoulder. The needle was previously dipped in a solution of carbolic acid and oil (1 to 15).

The patient went on guard at the Residency on the 22nd instant, and slept during a portion of the night on the ground, and it appeared to me probable, from his symptoms on admission, that he had met with a chill, from the cold morning air, following great heat during the day. In the evening he presented himself for admission, complaining of a stiff neck; he had felt the stiffness first in the morning, but it had become worse, and in consequence he came to the hospital. Shortly afterwards I paid my evening visit, and on going up to the man's cot, found him in well-marked tetanic spasms. I treated him chiefly with the chloral hydrate in thirty-grain doses, repeated frequently, but without any benefit. Chloroform was the only remedy

which afforded a temporary relief. I tried the subcutaneous injection, at one time two grains and at another time three grains of the chloral hydrate, without the slightest effect being produced.

Though he slept for several hours on the night of admission (the 23rd), the spasms returned, and became more frequent and more powerful, until the morning of the 25th, when he died, apparently from exhaustion, about 9 A.M. He was a young, strong, healthy, well set-up man. I was much puzzled by this, as I had given the subcutaneous injection for fever some hundreds of times, had always taken it that way myself, and the civil surgeon from whose successful treatment I had been led to employ this method had used it (the neutral sulphate) upwards of 5000 times, and he had not met with an authenticated case of sloughing, even, following his treatment. There was no external mark, nor could I detect any lesion beneath the skin or muscles of the arm which indicated the irritation of a nerve—that is to say, there was nothing perceptible to a careful examination with the naked eye. I therefore attributed the tetanus to the effects of a rapid change of temperature, the man having been weakened by a previous attack of fever, and having thus become more liable to a chill.

CASE 2.—I was naturally much surprised when, only a few hours afterwards, I was sent for to see another sepoy, who had commenced to exhibit similar symptoms. Private Babajie Mori was admitted to hospital on Oct. 17th, for intermittent fever, having previously been attacked for two or three days. He received the subcutaneous injection of quinine, and, with the exception of a slight attack on the 18th, had no return of the fever, and was discharged on the 24th. Early on the morning of the 25th he felt pain and stiffness in the jaws and right side of the neck, which gradually increased until he was admitted to hospital about 1 P.M. He complained that his arm pained him at the site of the injection, and there was certainly a small knotty swelling under the skin at that time. Since leaving the hospital he had eaten nothing but some rice and mutton, and had applied to no native hakim for medicine. At night he had slept in his hut. Notwithstanding chloral hydrate by the mouth and subcutaneously, large doses of the acetate of morphia hypodermically, and his being kept under chloroform frequently, the spasms increased rapidly, and he died the next day about noon.

On examining the arm the hard swelling had disappeared, and there was no trace of any lesion to a nerve. Though I could detect no injury myself, I am obliged to attribute these cases to the hypodermic injection. The coincidence was too marked to consider the tetanus induced by rapid changes in the temperature, though I am told that in Goojerat during the commencement of the cold season, cases of idiopathic tetanus are not uncommon.

I gave all the injections myself, and always cleaned the syringe carefully after use; and I had too the practical experience of the result of the large number of cases given me by the civil surgeon I referred to before.

There was no evidence whatever that either of these men had had poison administered to them, which might have produced a train of similar symptoms. I have been therefore obliged, as such results have a most prejudicial effect on the men of the regiment, to abandon what has hitherto been with me a most ready and efficacious method of treating malarial poisoning.

Baroda.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The last meeting of the twentieth session was held at the Royal Kent Dispensary, Greenwich-road, on Friday evening, May 5th. In accordance with Rule 15, three members were chosen to audit the treasurer's accounts. The following cases were brought forward for discussion:—Dr. W. Carr: A Case of General Dropsy (Bright's disease) cured by puncturing the legs and diuretics, illustrating the doctrine of elimination. Dr. Ralph Goodlee: A Case of Prostatic Disease. Mr. John Prior Purvis: A Case of severe Trifacial Neuralgia of long standing successfully treated by the Continuous Galvanic Current. The annual dinner will be held on Wednesday, June 28th, at the Ship Hotel, Greenwich, at 6 for 6.30 P.M.; the president, Dr. J. N. Miller, will occupy the chair.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

RHEUMATIC FEVER TREATED BY SALICYLIC ACID.

(Under the care of Dr. SIEVEKING.)

For the following notes we are indebted to Messrs. J. Jackson Gawith and H. Sworder, house-surgeons.

CASE 1.—Julia L——, aged forty-five, was admitted into hospital on March 27th, suffering from acute rheumatism. About a week before admission she was taken ill with severe pains in the hips and legs, loss of appetite, scanty and high-coloured urine, and general feverishness. When admitted she had well-marked symptoms of rheumatic fever; temperature 103·2°; pulse 108; tongue thickly coated with fur; pain and swelling in both knees, more especially in the right, also some tenderness in the right ankle.

Salicylic acid was ordered in twenty-grain doses every hour for six hours, together with milk, beef-tea, and imperial drink as diet. The first powder was given at 4 P.M., the temperature being 103·2°. After the second powder she expressed herself as feeling much relieved, but complained of some slight noises in her ears and feeling rather silly. It was certainly difficult to make her answer questions properly. Heart-sounds quite normal. Temperature after the fourth powder 101°; temperature after the sixth powder 99·2°.

March 28th.—Had a fairly good night; perspired very freely; tongue still furred; knee-joint still a little swollen, but feels about normal in temperature. Temperature 99·2°; pulse 100; urine cloudy, sp. gr. 1010, acid, a very little albumen.

29th.—Slept well; tongue cleaner; bowels confined; no pain anywhere; feels quite well, but weak. Temperature 10 P.M. last evening 99°; temperature at 9 A.M. this morning 98·4°; pulse 88; heart sounds quite normal; perspired a little during the night; temperature this evening 98·2°; pulse 88.

30th.—Had a very good night; appetite improving; bowels open; in no pain; no heat or swelling of knees; no albumen in urine. The following mixture ordered:—Six grains of citrate of quinine in infusion of quassia three times a day.

April 2nd.—Still going on favourably; is in no pain. Can stand, but is too weak to walk.

5th.—Convalescence continues. Patient can walk about the ward well, and appears quite strong again. No morbus cordis.

7th.—Was discharged to-day, perfectly well.

CASE 2.—Emma H——, aged twenty-seven, unmarried, a servant, admitted March 25th. She had severe pain in the left knee, which was swollen and red, and about an inch and a half larger than the other, with some effusion into the joint. There was also some pain and tenderness in the right ankle, and on the inner side of the same there was an erythematous blush, which gave rise to a suspicion of the formation of an abscess. She had not been well for a fortnight, but was only forced to remain in bed three days before admission. Tongue thickly coated; bowels constipated; temperature 101·4°; pulse 110. Salicylic acid, in twenty-grain doses, ordered every hour for six hours. After the fourth powder the temperature was 101·8°, but the pain in the knees was very much less. After the sixth powder the temperature was 100° and the pulse 108; skin very moist, and in a free perspiration.

March 26th.—Had a good night. Tongue furred; rather dry in middle. No pain, except a little in right knee. Left knee still one inch larger than right.—10 A.M.: Temperature 98·8°; pulse 104.—12 P.M.: Temperature 100·4°; pulse 110.

At 3 P.M., the temperature being 101·4°, salicylic acid was ordered, in twenty-grain doses, every hour for four hours.—Temperature, 4 P.M., 101·2°; 5 P.M., 101·2°; 6 P.M., 101°; 8 P.M., 100·2°; 10 P.M., 99°; 12 P.M., 99°. She vomited up two of the powders, so they were repeated.

27th.—Slept well. Tongue furred. No pain in joints when movement is made, but the swelling over the ankle is still hot, red, and painful. No heart-sounds to note. Temperature 99·8°; pulse 104.

28th.—Had rather a restless night, but in no pain this morning. Temperature 99°; pulse 100.

29th.—Seems quite free from rheumatic pain, but complains of great pain in swelling at right ankle. Poultice ordered to be applied. Tongue cleaning. Left knee is much smaller than yesterday. Temperature 100·4°. Ordered ten grains of salicylic acid three times a day.

30th.—Had a very bad night. Could not sleep on account of pain and discomfort in the right ankle. No signs of any return of rheumatism. The abscess was opened, and patient put under surgical treatment, and is now convalescing rapidly.

WEST LONDON HOSPITAL.

CASE OF HÆMATOMA OF THE DURA MATER.

(Under the care of Dr. THOROWGOOD.)

THE following details are from notes by Mr. Angove, house-physician.

Robert M——, aged fifty-seven, cabman, admitted April 17th. A spare, dark man; has been subject to a great deal of exposure for some years, and, though a hard spirit-drinker, has had good health up to a month ago, when he had a fall. For a fortnight after it he complained of pain in his head and a general feeling of malaise, in consequence of which he laid up. A fortnight before admission the pain increased, with occasional shiverings, and for the last few days he had been slightly delirious. His bowels had not been open for four days.

When admitted he was in a semi-unconscious condition and speechless. When told to show his tongue, he partially did so after a slight delay. His pupils were contracted and very sluggish; his muscles were in a state of extreme rigidity, the flexor muscles of his arms being particularly so. There was no paralysis; tongue brown. Ordered five grains of iodide of potassium in peppermint water three times a day, and a pill containing three grains of calomel and one drop of croton oil at once.

April 18th.—In much the same condition. Had slept most of the night, waking up at frequent intervals for a short time. Takes what liquid nourishment is offered him; bowels not open; passes his urine involuntarily, some of that collected being sp. gr. 1025, high-coloured, and containing a trace of sugar, but no albumen, acid reaction. Respiration 14, regular, not forced; face dusky; tongue brownish. Chest-resonance normal; heart-sounds natural, though rather weak. Ordered ten grains of calomel and colocynth pill and a simple enema.

19th.—In just the same condition; the enema returned at once, owing to some obstruction in the rectum. On an examination it was found filled with hard scybalous masses of fæces, which were cleared out by the hand, and a large quantity of warm water injected high up. A short time afterwards a considerable quantity of partially liquid fæces was ejected. In the evening he seemed better, and, when asked what he felt, complained of pain in the left side of his neck, but not of his head.

20th.—Less conscious than he was yesterday evening. Still takes what liquid nourishment is offered him. Bowels not open. Tongue dry, brown, and cracked.

21st.—In just the same condition. Bowels not open. Ordered five grains of calomel.

22nd.—Much more unconscious. Died suddenly in the afternoon.

The examination of the body was made twenty-four hours after death. On removal of the calvaria, to which the dura mater adhered very closely on the left side of the parietal convolution, this membrane was of a green colour, and when cut into a small quantity of partially disintegrated blood escaped from between it and the pia mater. These two membranes were considerably thickened and stained of a brownish colour. On the right side, towards the temporal fossa, was what at first seemed a tumour growing from the inner surface of the dura mater, but which, when carefully examined, was found to be a sac about four inches long, two inches deep, and one inch thick. Its outer wall seemed to be composed of dura mater, and the inner wall of pia mater; it was full of blood-clot undergoing the process of disintegration. The walls of the sac and the membranes around for a little distance were considerably thickened, and stained brown. The brain was perhaps a trifle congested; it was much compressed, in fact there was a considerable hollow in the right side to make room for the cyst. There was no excess of fluid in the ventricles. The other organs were healthy, with the exception of the left lung, at the base of which there were three or four rather large infarctions of blood.

Remarks.—The day after this man's admission to the hospital, at the visit, Dr. Thorowgood and Mr. Angove carefully examined his head for any point of external soreness. Beyond some slight tenderness at the back of the neck there was nothing to point to anything external. The man, though unable to answer questions, was conscious of pain, as was seen when a catheter was introduced.

The general muscular rigidity pointed to some irritative lesion of the encephalon, and note was taken of the constantly contracted state of the pupils, a symptom on which Griesinger lays stress as indicative of irritation of the cerebral surface.

Attention may be drawn to the collection of disintegrating clot on the left side of the brain as well as on the right, as illustrating the correctness of the opinion that the hæmatoma not uncommonly affects both sides of the brain.

EDINBURGH ROYAL INFIRMARY.

CASE OF EXCISION OF TONGUE FOR CANCER; CURED.

(Under the care of Professor SPENCE.)

FOR the following notes we are indebted to Mr. Thomas Spence, M.B., C.M., house surgeon.

W. W——, aged fifty-four, a light porter, was admitted to Ward 18 (surgical), on January 18th, 1876, suffering from epithelioma of the tongue. The patient was a thin, spare man, of sallow complexion. On the dorsum of the anterior part of the tongue a cancerous ulcer of about the size and shape of a halfpenny piece was found. No glands were affected. The family history was unimportant. The patient confessed to having been a confirmed smoker and drinker, and stated that three years ago he noticed a small pimple on the tongue. This gradually increased, but it was only two months before admission that he applied for medical advice at the Cowgate Dispensary, where he was seen by Dr. Hendry, who sent him to the infirmary.

On Jan. 25th, after the patient had been kept under observation for a week, he was put under chloroform, and Prof. Spence, assisted by Dr. Duncan, proceeded to remove the tongue. An incision having been made in the middle line of the chin, the symphysis menti was sawn through, and the incision prolonged down to the os hyoides. The two sides of the lower jaw were then held apart, and the tongue being drawn forwards by a vulsellum, a needle armed with strong twine was passed through its tip. By these means the tongue was drawn forward and then amputated, except about half an inch. The lingual arteries, together with several minor bleeding points, were tied, and the stump was washed with a solution of chloride of zinc, and a piece of twine passed through it to prevent its retraction. The symphysis was then united in two places by thick silver wire, the superficial incision being closed by several silver sutures, and a large drainage tube passed through the back part of the incision. A small œsophagus tube was then passed, by way of the right nostril, through the pharynx into the œsophagus. The patient have been put to bed, twenty-five grains of bromide of potassium and a little brandy were administered.

Jan. 26th.—Temperature 99·7°; pulse 104. Patient slept badly. He is fed at short intervals with small quantities of milk, white-of-egg, and brandy; and the mouth fre-

quently washed with a solution of chlorate of potash, ten grains to the ounce.

27th.—Temperature 100·4°; pulse 120. Still sleeps badly. He is now getting beef-tea in addition to the milk, eggs, and brandy.

28th.—Temperature 99·8°; pulse 96. The cut surface looks pretty clean.

29th.—Temperature 99·4°; pulse 96. Has slept better. The œsophagus-tube was removed, and the patient fed by a catheter passed into the œsophagus.

30th.—Temperature 99·2°; pulse 102. Can swallow without the catheter.

31st.—Temperature 99·8°; pulse 98. The cord left in the root of the tongue was removed. Urine acid, loaded with urates.

Feb. 1st.—Temperature 99·2°; pulse 94. Sutures in front of chin removed.

2nd.—Temperature 98·6°; pulse 88. Root of tongue touched with chloride-of-zinc lotion.

4th.—Temperature 98·4°; pulse 84.

9th.—Temperature 98·9°; pulse 84. A smaller drainage-tube put in. Discharge slight.

From this date till March 10th the temperature and pulse continued normal. On that day he was allowed minced collops instead of the liquid nourishment he had formerly received, the tongue seeming quite well; and on March 14th a tooth which had prevented the jaw from uniting more closely was removed.

The patient can now speak quite distinctly, and in doing so seems to tilt upwards and forwards both os hyoides and larynx.

The patient left, cured, on April 6th, at which date deglutition and speech were quite easily performed.

Microscopic examination showed the characteristic appearances of epithelioma in a most marked degree.

HÔPITAL ST. LOUIS, PARIS.

CYSTIC SARCOMA OF THE BREAST; OPERATION; RECOVERY.

(Under the care of M. PÉAN.)

V. F——, aged sixty-seven, washerwoman, married, was admitted into the hospital on March 24th with an enormous tumour of the right breast. The family history was extremely satisfactory, the patient being one of six children, all of whom are alive and well, she herself being the mother of two children, both of whom are in perfect health. She declared that she had never before been seriously affected in her life. There was no trace of syphilis. About a year ago the patient noticed that she had a small indurated mass in her right breast, which rolled under her fingers; but as this did not cause her any pain she did not feel at all anxious concerning it. Six months later the tumour had acquired the size of the fist approximately, and had grown considerably harder in substance. Since that time it had made incessant and rapid progress in size.

On admission, she appeared fairly nourished. She stated, however, that she had grown considerably thinner within the last six months. Her appetite had diminished greatly of late, and the digestive organs appeared to be very slow in their functions. The heart-sounds were normal. There was nothing wrong with the lungs. She was considerably inconvenienced by the presence of her tumour, owing to its enormous size, which equalled that of an average adult's head. She experienced great pain, especially at night, in the right mammary region, and along the corresponding arm as far as the elbow. The skin over the tumour was tensely drawn and shiny, and was adherent to its anterior surface. In places the skin presented a bluish tinge, owing to the great vascularity beneath; the rest was colourless. On touching the surface of the tumour, the hand perceived a sensation of fluctuation in three points, which denoted the presence of a certain number of cysts. The whole mass was slightly movable, and its surface was nodulated.

April 2nd.—Operation was performed by M. Péan, who made two curved incisions, having a horizontal direction, and whose extremities were made to meet and to circumscribe the basis of the tumour. The enucleation was then effected with great ease, and a portion of the pectoralis major muscle was cut away with it, as it was found to be lifted up by the tumour. The thorax upon the place where the tumour had been situated was indented instead of being rounded as it is in its normal condition, and the muscles were found to be slightly atrophied. The wound bled considerably, but the hæmorrhage was easily arrested by the application of the hæmostatic pincers of M. Péan, with which he always seizes the bleeding vessels, and which he leaves in the wound under the dressing for a time varying with the size of the vessel, never making use of the ligature, even in amputations or other operations, where large vessels are intercepted. The wound was then brought together with a metallic suture, and the patient was removed into the ward. Evening temperature 39° C.

The tumour, which weighed nearly seven pounds and a half, was found upon examination under the microscope to be of a sarcomatous nature, and contained three cysts, which were filled with semi-transparent fluid.

3rd.—The patient has passed a very fair night, having slept four hours. She took a little soup this morning with pleasure. Pulse 108; temperature, morning, 38° C.; evening, 38·2°.

4th.—Wound looking healthy. Sleeps well, and says she feels very well, and inclined to eat. Pulse 100; temperature, morning, 39°; evening, 39·6°. To-day all the hæmostatic pincers were taken off.

5th.—Continues to go on very well. Has hardly any fever; tongue clean. Pulse 100; temperature, morning, 37·5°; evening 38°.

7th.—Pulse 100; temperature, morning, 37°; evening, 37·6°. Two of the sutures came away to-day. The wound has begun to heal in a small portion, and the remainder is going on satisfactorily. Suppuration is very moderate. Appetite good.

12th.—The patient is doing very well indeed. The wound is progressing favourably. She sleeps and eats well; motions regular. Pulse and temperature normal.

20th.—The patient leaves the hospital to-day, completely convalescent, and is ordered to the country for a fortnight.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

THE ordinary meeting of this Society was held on the 16th inst., the chair being occupied by the President, Mr. George Pollock. This being the last meeting of the Society during the session, the number of specimens exhibited was large, and it was probably owing to the long list of agenda that barely any discussion took place upon the various points of interest raised by the exhibitors. Dr. Murchison showed a specimen of cirrhotic liver from a child in whom there was a history of spirit-drinking. An interesting example of syphilitic disease of the liver in an infant was shown by Dr. Barlow; and, among other cases of interest, may be indicated the specimens of spinal sclerosis and of cerebral aneurism exhibited by Dr. Gowers, and of malformed hearts by Drs. Barlow and Yeo.

Dr. Sutro and Dr. Tredennick were elected members of the Society.

The report of the Committee on Morbid Growths upon Mr. Maunder's specimen of Mammary Tumour was read by Mr. Wagstaffe. So far as the condition of the specimen allowed of examination, the tumour had the characters of scirrhus. Reports from the same committee were also submitted upon Dr. Morison's specimen of Disease of Pulmonary and Tricuspid Valves (*vide* THE LANCET, vol. ii. 1875, p. 838), and on Mr. Lennox Browne's specimen of Ulceration of the Larynx (*vide* THE LANCET, April 8th, 1876, p. 533). In the former case, the reporters concurred with the exhibitor in every respect; in the latter, the result of examination showed no evidence of tubercle or syphilis in the seat of ulceration.

Dr. MURCHISON showed a specimen of Cirrhosis of the Liver in a child nine years of age. The specimen exhibited the usual characters of that affection, and, clinically, the disease began with dyspeptic symptoms, morning vomiting, with, at the end of about a month, ascites. Tapping was twice performed, and death took place from exhaustion. Dr. Murchison remarked upon the acute course of the disease in this case, which also afforded an illustration of the fact that in children hepatic cirrhosis may be traced to the same starting-point as in adults. This child was the son of a publican, and had been in the habit of taking wine before meals. Niemeyer mentions, on the authority of Wunderlich, instances of cirrhosis in "two sisters, aged eleven and twelve years"; both "were great schnapps-drinkers."

Dr. BURNEY YEO brought forward a remarkable specimen of Disease of the Aorta, in which a congenital malformation was combined with extensive acquired disease, resulting in extreme stenosis of the vessel. The specimen was removed from a boy, ten years of age, who was first seen as an out-patient on the 5th February, with a history of cough and dyspnœa of three weeks' duration. There was a loud, harsh, prolonged murmur audible all over the chest, and evidence of cardiac hypertrophy. The pulse was very rapid, and the temperature fluctuated from 98° in morning to 103° in evening; these oscillations occurring regularly for a long period. There was extreme pallor and emaciation. The patient was admitted into the hospital, contracted scarlet fever, and was removed in a dying condition. A post-mortem examination was obtained, and there was found to be extreme contraction of the aorta just above its valves; the narrowing being greatly increased by a thick layer of vegetations. Just above the constriction was a pouch the size of a hazel-nut, and the vegetations extended into the large vessels given off from the aortic arch. The left ventricle was hypertrophied, and the visceral pericardium was coated by lymph. The pulmonary artery was bifurcated, about three-quarters of an inch above the semilunar valves, and Dr. Yeo thought that the posterior pulmonary trunk probably aided in producing the contraction of the aorta. He remarked that the specimen was an instance of congenital stricture of the aorta, in which recent inflammation had possibly been set up by the friction of the blood current against the narrowed vessel. In spite of this, there was no symptom prior to the illness; there was no history of rheumatism or chorea. In reply to Dr. Greenfield, Dr. Yeo stated that the specimen was too mutilated to show any ductus arteriosus.—Dr. PYE-SMITH inquired whether the aortitis was ulcerative, or was there any condition which could account for the high range of temperature in the case?—Dr. YEO said there was no evidence of ulceration.

Dr. T. BARLOW showed a recent specimen of a Liver from a case of Infantile Syphilis. The child was twelve weeks old, and came as an out-patient to the Hospital for Sick Children with well-marked signs of congenital syphilis. There was marked snuffles, desquamation on face and legs, and symmetrical sores on the nates, and, in addition (about a week after it was first seen), some thickening and enlargement of phalanges of the index-fingers and of the lower end of the ulna. The spleen was large, but the liver not abnormal in size. The child died from asthenia, and at the post-mortem examination the liver alone of the internal viscera was found to be affected. On the surface of this organ were some depressed areas, about eight in number, corresponding to circumscribed pale patches, differing but little in appearance from the surrounding tissue. The capsule was thickened over two of these patches. Dr. Barlow remarked that the specimen served as a connecting link between the ordinary form of gumma and the fibroid patches seen in acquired syphilis. It bore also upon one of the propositions laid down by Mr. Hutchinson, the child still exhibiting secondary symptoms, and yet the liver containing "gummata" which, from the fact of their undergoing retraction, were probably receding.

Mr. NETTLESHIP brought forward a case of Sarcoma of the Sclerotic. The patient, a male forty-two years of age, was first seen in August, 1874, having then a firm tumour in the ciliary region of the sclerotic of the right eye, slightly overlapping the cornea. The eyeball was congested, the cornea hazy, and tension was increased. There were all the symptoms of glaucoma, except that the anterior chamber was not shallow, and the pupil was not dilated. On removal there was no evidence of intra-ocular disease to the naked eye. There was much blood extravasated between the choroid and sclerotic. Microscopically the growth, which was composed of rather large, closely packed spherical cells, was seen to have extended through the sclerotic to the iris, and it was interesting to note that the cellular infiltration was most abundant in the parts where the tissues were the least compact; invading thus the part between the sclerotic and the ciliary muscle, but not affecting the muscle itself; and passing forward from the suspensory ligament of the iris quite to the pupillary border of that structure. The outer margin of the cornea was also infiltrated. There was cupping and partial atrophy of the optic disc. The case showed how the symptoms of glaucoma depended upon the parts involved rather than upon the extent of the growth within the eyeball. In reply to Mr. Wagstaffe, Mr. Nettleship stated that there had been no recurrence, and that the opposite eye was normal.

Mr. BUTLIN exhibited a Tumour of the Scalp, which occurred in a woman forty-eight years of age, under the care of Mr. Callender, at St. Bartholomew's Hospital. The tumour was of the size of the fist, and was seated over the occipital and parietal bones. It was said to have existed for many years, but for the last two years it had increased in size and had become ulcerated. It was partially removed, and was found to be composed of a large cyst, probably sebaceous, filled with growths of a papillomatous or epitheliomatous nature. There was no case on record in the Pathological Transactions of such a growth arising in the interior of a sebaceous cyst. It contained a large quantity of "cell-nests," concerning the mode of formation of which Mr. Butlin stated there were two principal views: one was that of Thiersch, who attributes their production to multiplication of the innermost cells and consequent flattening of the peripheral cells; and the other, that recently described by Dr. Gowers, in which young cells arise within vacuolated cells, of which the protoplasmic contents are displaced to the periphery. The present specimen afforded some support to the latter view, and in some parts the cells contained greatly enlarged nuclei, as if in process of development into new cells. He had not been able to follow the details in the process of nest-formation, although the appearances suggested that the process was the same as that described by Dr. Gowers.—Dr. GOWERS asked if the observations had only been made on the hardened specimen, because he had found that the process in question could only be clearly seen in the fresh state. Hardening reagents appeared to render the delicate protoplasm granular, or to cause rupture of the vacuoles and shrinking of the cells. The vacuole was a special formation in the cell, and within that the new cell was formed. The large nuclei observed by Mr. Butlin were possibly altered vacuoles. His own observations were made upon sarcomas, and it was interesting to note the striking resemblance of the "nests" found in these growths to those found in epithelioma.—Mr. BUTLIN said that his observations were made on the hardened specimen.

Dr. GREENFIELD exhibited specimens and drawings from a case of Lymphadenoma, taken from a female forty-five years of age, under the care of Dr. Peacock, who was admitted with a hacking cough, and a history of progressive emaciation, and much weakness. There was enlargement and induration of the cervical glands, and several rounded tumours on the skin, which diminished in size before death. In the left groin there was a mass of enlarged glands infiltrating also the skin, and the femoral vessels were completely invested in a mass of new growth; whilst a chain of enlarged and indurated glands accompanied the iliac vessels. On the right side the inguinal region was also occupied by a mass of large, firm, and slightly pigmented glands. Large masses of glands also occurred in front of the spine; they were mostly of yellowish-white colour, and tolerably soft. Others, especially mesenteric, were deeply pigmented. Similar enlargement of glands occurred in mediastinum, axilla, and neck. Sections of the cutaneous tumours showed little else but thickening and induration of the skin to the naked eye; but microscopically the whole cutaneous tissues were found at these spots to be infiltrated with lymphadenomatous growth, especially around the sweat-glands and hair-follicles. The lower lobe of the right lung was almost wholly consolidated, hard, and nodulated; the

pulmonary tissue was infiltrated and pigmented, giving the cut surface a marbled appearance, varied by sharply-outlined nodules. At the root of the lung was a mass of white infiltration, and great thickening of the vessels and bronchi. Similar growths occurred in the left lung. The spleen was greatly enlarged, weighing sixty-three ounces, the splenic pulp being much increased. So far as he knew, this was the only case of lymphadenoma in which the skin was infiltrated, and he had brought it forward on that account, and also in order to raise the question as to how far such cases are to be considered examples of true Hodgkin's disease.—Dr. TAYLOR asked if there was any leucocythæmia in this case.—Dr. GREENFIELD replied that there was no note as to examination of the blood during life. He had examined the blood after death, but had found no excess of white corpuscles, but he did not think that fact conclusive.

Dr. TURNER showed a specimen of Tuberculosis of the Spleen. The patient was admitted into St. Thomas's Hospital, under Dr. Peacock's care, with a history of an illness of one month's duration. He was much emaciated; the temperature raised from 99° to 101°, and subsequently reached 103°. The spleen was notably enlarged. Four days before death he became delirious, and sank into a comatose condition. At the autopsy there was found general tuberculosis, meninges, lungs, kidneys, &c., presenting miliary granulations. The spleen weighed fifteen ounces, and was completely stuffed with caseous nodules of the size of large peas, some of which were softening. Their yellowish-white colour contrasted strikingly with the dark-red splenic pulp. The liver also contained some large tubercular nodules, and there were some ulcers in the ileum. There was only one similar specimen to this in the museum of St. Thomas's Hospital, but at Guy's there were four such, one of which was mounted by Sir Astley Cooper.—Dr. BARLOW did not think this condition of spleen so exceptional. He had met with some examples in children in which the spleen contained several caseous masses, some of them softening.—Dr. GREEN also thought the condition not very peculiar.—Dr. GREENFIELD had not met with a similar case; the tubercles in the specimen, which had somewhat lost its character by keeping, appeared of very uniformly large size and regular arrangement.

Dr. GOWERS exhibited sections and drawings of Sclerosis of the Posterior Columns of the Spinal Cord, obtained from two cases. One was an example of locomotor ataxy, showing uniform sclerosis of the posterior columns throughout the whole length of the cord. A year before death the patient exhibited inco-ordination of movement of the arms and legs without loss of power and with slight impairment of sensation. These symptoms had existed for two years. The second case was that of a young man who died after a series of epileptiform convulsions. In this case there was no history of any ataxic symptoms, certainly there was none of the arms. The sclerosis in the dorsal and cervical regions was confined to the posterior median columns, and in this it bore out the statement of Vulpian and Pierret that in such cases the lesion is not productive of ataxy, but is to be regarded as an example of ascending degeneration from disease in the lower portion of the cord. In this case in the lumbar region there was sclerosis of the whole posterior columns. There may have been some ataxy, but if so it must have been to a very slight extent, for the existence of the sclerosis was only ascertained accidentally in examination of the cord after death.

Dr. GOWERS also brought forward a specimen of Cerebral Aneurism, which presented many features of clinical and pathological interest. He gave the following history of the case:—A young woman, twenty-one years of age, the subject of chronic renal disease, was admitted into the Hospital for Paralysis and Epilepsy with left hemiplegia of one month's duration. The lower part of the face was paralysed, to voluntary movement almost absolutely, but in emotional movements there was scarcely any difference between the two sides. The onset of the hemiplegia was sudden, and apparently without loss of consciousness. She improved during three weeks, when she was attacked with epileptiform convulsions, which recurred during three days, and death took place after only twelve hours' coma. At the post-mortem examination the kidneys were large and white, and the mitral valve was fringed with vegetations. There was an old caseous infarct in the spleen. The brain was the seat of two hæmorrhages, one old and the other recent. The former, indicated by a chocolate-coloured clot, was seated in the upper part of the right transverse frontal fissure, the convolutions being separated by it. To this the hemiplegia was evidently due. It was also interesting as being in the region assigned by Ferrier to be the centre for facial movements. The other hæmorrhage occurred in the white matter, outside the optic thalamus and corpus striatum, reaching as far as the fissure of Sylvius. At this spot was an aneurism, seated on the second branch of the Sylvian artery. The blood had found its way into the lateral ventricle, a thin band of clot lying in the sulcus, between the thalamus and corpus striatum, and then passing through the foramen of Monro, to occupy precisely the same position in the left lateral ventricle; a similar thin clot, continuous with this, lay in the third ventricle, the iter, and the fourth ventricle, where the largest quantity of blood existed. This disposition of the coagula showed that the blood must have been slowly effused, and have trickled in the direction of least resistance. Besides the two aneurisms which had ruptured, both found on the Sylvian artery, were two others, much smaller; and their occurrence on the branches of the same vessel, and that the most prone to embolism, favoured the view first propounded by Dr. Church, that such aneurisms depend upon embolism, and are associated with endocarditis. In this case there was endocarditis, and an embolus in the spleen, whilst the other arteries of the brain were healthy. The not uncommon rupture of superficial aneurisms into the substance of the brain rather than externally might be accounted for by the thickening which occurs in such cases in the superjacent subarachnoid tissue, and by the slowness of rupture favouring disintegration of the brain-substance, the disintegration thus opening up a path for the blood.—Dr. GREENFIELD did not think slow hæmorrhage from rupture of a cerebral aneurism was exceptional; he could recall two cases in which there was the same slight effusion into all the ventricles as in this case. The hæmorrhage appeared to have occurred into the nucleus tæniformis, which he believed was not uncommon.—Dr. GOWERS said the hæmorrhage was wholly outside the lenticular nucleus, showing conclusively that it could not have occurred from one of the internal vessels.—The PRESIDENT mentioned a case of aneurism of the ulnar artery in consequence of embolism, in a boy of sixteen years of age. There were vegetations in the mitral valve and an infarction in the spleen.

Dr. BARLOW showed two specimens of Congenital Heart Disease. The first was the case of a male infant, who, when three months old, was brought to the out-patient department of the Hospital for Sick Children. He was then the subject of rickets, and was marasmic. His diminutive size and the slate colour of the lips were the only signs which raised the suspicion of congenital heart affection. He was under observation for seven months, during which time his nutrition greatly improved, and with it a progressively increasing hypertrophy of the heart was observed. At no time was there any murmur. Death took place from acute bronchitis. The heart was found to be hypertrophied and dilated. The foramen ovale was patent, but the opening was valved; the tricuspid orifice was normal. The wall of the right ventricle was thicker than that of the left, and the pulmonary artery occupied a normal position, but was thickened; there was patency of the ductus arteriosus, which was continued into the descending aorta. To the right of, and posterior to the pulmonary artery, was the ascending aorta, which was smaller than the former vessel, and after giving off the coronary arteries, terminated in the great vessels. The left auricle and the mitral orifice were natural, but the left ventricle did not give off any vessel, but opened into the right ventricle by an aperture at the "undefended spot." Dr. Barlow added that the origin of the descending aorta from the pulmonary artery (i.e., from the fifth left arch) was recorded by Dr. Peacock, but the origin of the aorta to the right of, and posterior to the pulmonary artery was undescribed. The other specimen, from an infant ten weeks old, slightly cyanosed, with a heaving impulse of heart, no thrill, but a murmur audible at apex and down the sternum, showed a widely patent foramen ovale and closure of the tricuspid orifice, which was marked by a cicatrix-like line. The left ventricle was hypertrophied, and the mitral valve covered by vegetations. From the left ventricle some of the blood passed through

an aperture in the "undefended spot" to the right ventricle, which was much atrophied, and part into the aorta. Two of the pulmonary valves were partially blended by a frænum, whilst the aorta, after giving off an arch, was continued up into a pouch which was nearly blind. Possibly the aorta may have communicated with the pulmonary artery, whence the descending aorta may have arisen.

Mr. PUGIN THORNTON exhibited the Larynx from a case in which he had performed thyrotomy in June, 1872. The patient was a child two years and a half of age, and the operation was undertaken for the removal of growths. Six months later tracheotomy was performed, and the tube was worn for three years and a half, the child dying recently of marasmus following whooping-cough.

Mr. NUNN exhibited a specimen of Tumour of the Right Fibula, for which he had performed amputation at the knee-joint. The patient, a girl aged thirteen, was admitted into the Middlesex Hospital with an ovoid tumour of the right leg at the lower one-fourth of the fibula. There were some enlarged glands in the popliteal space. The tumour did not at first increase in size, but after some weeks it enlarged rather rapidly, and became painful. After removal, besides the chief tumour (which was fibro-sarcomatous in nature) springing from the periosteum at the lower end of the fibula, there was a smaller mass, not felt during life, close to the head of the bone. The limb was amputated at the knee-joint, the patella being left in the anterior flap.

The Society then adjourned until October.

CLINICAL SOCIETY OF LONDON.

THE ordinary meeting of this Society was held on May 12th, Sir W. Jenner, President, in the chair. The main business of the evening was the discussion on Mr. Maunder's cases of subcutaneous section of the femur. The patients were exhibited to the members, and were closely questioned as to the benefit gained by the operation, the results of which were generally pronounced to be highly successful.

Mr. MAUNDER read a paper "On Subcutaneous Osteotomy," and exhibited patients in illustration of the important results obtained with little risk. The femur was the bone operated on in all the four cases, two of the operations having been performed on the same patient with an interval of some twenty months. This patient, M. A. J——, now ten years of age, had been the subject of hip-joint disease, which had left the left thigh fixed by fibrous anchylosis at a right angle to the line of the spine, the head of the femur being wasted and displaced upon the dorsum ilii. Notwithstanding section of contracted muscles and subcutaneous division of the neck of the bone, as suggested by Mr. William Adams, the deformity was in no way lessened, and Mr. W. Adams himself also failed a week subsequently in a similar case. This failure led the author to consider how otherwise to act, the outcome being the operation described. After alluding to Messrs. Brodhurst, L. S. Little, and Gant as pioneers in this department, he pointed out that while a certain number of cases of deformity at the hip-joint were remediable by section of the neck of the femur, a large number of instances of deformity in this region were not suited to that operation, but could be readily relieved by division of the femur at a suitable point below its upper extremity. Three cases were given, of which that of the child, M. A. J——, above mentioned, is typical. The first operation on her having failed, a second was performed, but below the lesser trochanter. Following the method suggested by Professor Volkmann, of Halle, Mr. Maunder uses chisels and a mallet. He employs a double-edged knife for the puncture of the soft parts, and lays great stress upon dividing these in such a manner that when the operation is completed the wound in the skin shall not communicate directly with the wound in the bone. He advocates also great care when one instrument is replaced by another, as the knife by a chisel, and one chisel by another, the one instrument being used as a guide to the other. The wound may or may not be closed by a catgut suture, and a compress and strapping are employed. Bony union must be encouraged by rest and a suitable splint. He deems it important also to support the soft parts about the wound in order to prevent oozing into the track of this, by the application of a sandbag after the patient is in bed. Such was the nature of the second operation performed on M. A. J——, above alluded to. After both primary union of the soft parts occurred. (This child was shown standing erect, and with her lower extremities parallel.) Another instance was that of a man twenty-one years of age, who had been the subject of hip-joint disease for seventeen years, and in whom a discharging sinus still existed, and does exist. The same operation was performed, and the deformity has been remedied. He can stand erect with the lower extremities parallel. The most interesting and important case was that of Richard H——, aged thirty. He was a sailor, who had broken his left thigh at sea, and, being without surgical aid, the fragments had united at an awkward angle, and with complete eversion of the foot. The man stated that the leg was perfectly useless to him as a sailor, by reason of this eversion of the foot, and was most anxious to have something done to remedy it. Here the *shaft* of the bone was divided. The foot could then be turned to the required position, and was so maintained. The wound healed primarily, the man had no pain nor loss of rest, and in six weeks bony union had occurred. Thus this patient, who at thirty years of age was deprived by the accident of his means of livelihood to which he had been educated, was by the operation restored to usefulness. The author remarked that in contemplating osteotomy in reference to the upper extremity of the femur, the point at which the bone is to be divided must depend upon the altered and relative condition of parts. Mr. William Adams's operation—section of the neck of the thigh-bone—appears to be applicable to cases of anchylosis and deformity, in which the head of the bone remains in the acetabulum, both without material loss of substance and also in the absence of much surrounding thickening about its neck. On the other hand, if there be great thickening, requiring an extensive use of the saw, so as to leave large surfaces of sawn bone in apposition, this extent of surfaces alone will prevent a restoration of the extremity to the desired position, and small benefit only will result from the operation. Also cases of hip-joint disease associated with more or less loss of substance, displacement of femur, fixity of its upper extremity by fibrous anchylosis and shortened muscles and distortion of the limb, are not suited to it, as was proved by the first operation on M. A. J——, where the deformity could not be remedied by it. Here it is that section of the bone below the lesser trochanter will make the surgeon quite independent of the fixed upper end of it, and will allow him to place the extremity in any position he may think fit, and ensure the greatest prospective benefit to his patient. Thus it will be evident that the large majority of cases of severe deformity resulting from disease of the hip-joint will be best remedied by division of the thigh-bone at some point below the lesser trochanter, whilst a minority will still remain best suited to section of the neck of the bone. Mr. Maunder remarked that the three patients whom he exhibited illustrated the value of the operation described, the result of which is that those who were previously burdens upon, could now become useful members of, society.—Mr. WILLIAM ADAMS congratulated Mr. Maunder on the success of his method of operating, which, whilst differing from that of others, was a successful instance of the good results of the subcutaneous method, without the occurrence of suppuration. Mr. Maunder's operation was applicable to a class of cases for which his own was unsuited—hence its value. The operation was available for the same class of cases as Mr. Gant's, in which the femur is cut through below the neck with a saw in a similar situation. Subcutaneous osteotomy could not, of course, be done with the same success as tenotomy, though in many cases the bone may be cut through with impunity. In the choice between the three operations regard must be had to the condition of the bones. If the neck still exists, as in cases of anchylosis sequential to rheumatism, pyæmia, and traumatic affections, its division by his own operation was advisable; but where, as in strumous disease, absorption of the neck and head and alterations in the joints had occurred, recourse must be had to division of the shaft, either by Gant's or Maunder's

operation, the difference between the latter being mainly a choice of instruments. Mr. Adams expressed his preference for a small subcutaneous saw as a more manageable instrument than the chisel and mallet.—Mr. GANT related a case in which he had performed subcutaneous section below the small trochanter in a boy six years of age, who had anchylosis of the hip with much deformity. The boy was scrofulous, and he agreed with Mr. Maunder that in such cases division below the small trochanter was best. A weight was applied, and the limb kept straight; primary union occurred, and a good result. He had recorded the case at the time in THE LANCET, but had not before published the ultimate result, and took this opportunity of mentioning it. The patient came back in three or four months, and could then stand and walk. (See the "Mirror," THE LANCET, December 21st, 1872.) In order that malformation might be corrected, he believed it to be important to divide the bone below the attachment of the psoas and iliacus, which otherwise, by their contracted and thickened condition, would impede replacement of the bone in good position.—Mr. SYDNEY JONES thought that Mr. Maunder's operation was of use only to correct deformity, such as follows fracture or hip-joint disease. He failed, however, to see any advantage in the use of the chisel in preference to the saw, as the latter could be used with a smaller incision in the skin. But Mr. Adams's operation does more than either. Where the only object is to correct deformity in one limb, it may be sufficient to divide below the trochanter, the defective play of the limb being in part compensated for by increased mobility in the lumbar region; but where both limbs are affected it is highly important to secure movement by dividing above the insertion of the muscles. But he agreed with Mr. Adams that his operation was applicable only when the neck of the bone was free from great alteration. Mr. Jones showed photographs of a case in which he had operated for anchylosis of both hips, with great deformity. He had used passive movement soon after the operation with temporary success, but after a considerable period he could not keep up the mobility.—Mr. BRYANT said that he had had four cases of good result with Adams's operation. Three were strumous, and one followed pyæmia; in two of these there was displacement of the head on to the dorsum ilii. For cases of deformity after fracture where no movement was expected or desired, Mr. Maunder's operation might be good, but he preferred Adams's as the simpler.—Mr. HEATH thought that the advisability of Sayre's operation should be considered. If movement can be gained it is no doubt a great advantage, but the difficulty of maintaining it is great. All the movement in Mr. Maunder's cases was in the lumbar region.—Mr. SYDNEY JONES explained that there was no difficulty in keeping up the movement for five months in his case, the limb being put in an outside splint for three weeks, and then passive movement being effected. There was apparently a good result five months after the operation, but at the present time, three years after the operation, there is very little movement in one, and next to none in the other limb.—Mr. ADAMS said that he had operated in five cases, and had collected twenty-two from various sources. In none of the five had motion been ultimately preserved. In one case on record good movement occurred, but there anchylosis had been desired. He had never used Sayre's method, nor antiseptics, and would not therefore speak of their results. He preferred the saw to the chisel, as being more easy of introduction.—Mr. HEATH suggested that division might be done *through* the great trochanter.—Mr. MAUNDER, in reply, said that had he been aware that Mr. Gant had used the saw in this operation he might have used it, but his attention had been drawn to the chisel by a paper by Prof. Volkmann. The use of three chisels was no doubt a disadvantage, and he hoped to have a single one constructed which would answer as well, on the plan of a carver's chisel. As to movement, he believed it to be undesirable in strumous cases, as the attempt to obtain it might set up inflammatory processes. Possibly the reason why movement occurred in some cases—e.g., in Mr. Lund's—was the atrophy of the head of the bone when detached from the shaft, and he mentioned a case where this appeared to have taken place. In order to ensure non-union of resected bones removal of a portion of bone is absolutely essential, as in excision of the elbow joint, for union will occur even after a very long period. His preference for division below the trochanter was founded on the existence of the fibrous growth around the neck of the bone and the shortening of the muscles, which rendered it impossible to deal with it as if in the normal condition.

A case of Intestinal Concretion passed per anum, reported by Mr. LEGGATT, was read. The case was that of a little girl, three years of age, of healthy family, who had suffered for a month from loss of appetite and constipation. On Dec. 6th she was seized with repeated vomiting, followed by diarrhœa and abdominal pain, with temperature of 102° F., and a torpid condition. On the following day she was weak and restless, the motions frequent, mucous, and curdy, tongue coated, no pain or tenderness in abdomen. The diarrhœa was temporarily checked, and the pain entirely ceased. On Dec. 10th she passed a small concretion without any pain, and on the 12th she was well. Previous to the attack she had been subject to occasional febrile attacks, with vomiting and pale stools, and she had for some months eaten brown bread. The concretion was small, weighing 7¼ grains; it consisted of earthy phosphates, organic matter, and fat, and on microscopic examination was found to be concentrically laminated, and to contain starch granules and portions of wheat husks. The author supposed that the concretion had been dislodged from the appendix by the vomiting and purging, which symptoms were probably due to other causes.—The PRESIDENT observed that the concretion resembled those usually seen in the appendix vermiformis. So far as he had observed in a considerable number of cases, the absence of pain in the cæcal region was no evidence that the concretion was not from that situation, pain occurring only when the inflammation extends to the peritoneal coat. The difficulty in the expulsion seemed to be due to the peculiar formation of the appendix, a valve being formed by its extremity, so that pieces of fæces can pass down but not up. Fortunately in this case the vomiting had dislodged it.—Mr. GANT mentioned two cases in which he had seen a bean in the appendix, leading to fatal peritonitis.—Dr. CAYLEY thought the size of the calculus a proof that it must have been formed in the appendix and not in the intestine.—Mr. MAUNDER questioned whether the contents of the large intestine could be affected by vomiting.—The PRESIDENT had meant to refer only to the general pressure on the contents of the abdominal cavity. He had examined the appendix in a great number of bodies with the object of determining the mode of formation and early condition of these concretions. He had found many with no symptoms whatever during life. He had never found any foreign body, although others had said they had; they were all formed by concretion around a small nucleus of fæcal matter which gave rise to chronic inflammation of the mucous membrane.—Dr. BASTIAN said he had once made a post-mortem examination on a case where the presence of the operculum of a whelk in the appendix led to ulceration, thrombosis of the portal vein, and abscess in the liver.—Dr. DUCKWORTH observed that fæcal matter often gets into the appendix, as Dr. Church had found on examining a large number of bodies.—Dr. THEODORE WILLIAMS had seen several cases of fæcal matter in the appendix. The peritonitis might become localised, and a cure by formation of abscess occur.—Dr. DUFFIN had seen a case of perforation of the appendix and consequent peritonitis where the appendix was full of hairs half an inch in length, and, on inquiry, it was found that they had been contained in some plumcake, of which the boy was very fond.—Dr. GREENFIELD inquired of the President whether he had found in any number of these cases that the appendix was especially attached, either by a meso-appendix or by some abnormal fold or pouch of the peritoneum. He mentioned a case which he had recently examined in which such a condition existed, and appeared to have had some effect in determining the occurrence of concretion.—The PRESIDENT, in reply, said that some such condition was very usual in these cases, a bend of the appendix being produced. In most cases these bodies did not form in a normal appendix. He had observed also that by far the larger number of cases occurred in boys, very few girls being thus affected.

BEQUESTS TO MEDICAL CHARITIES.—The Rev. Thomas Middleton, Rector of St. George's, Manchester, bequeathed the whole of his property, amounting, it is supposed, to about £14,000, to the Royal Infirmary, Manchester.

Reviews and Notices of Books.

Lessons from Nature, as manifested in Mind and Matter. By ST. GEORGE MIVART, Ph. D., F.R.S. London: Murray. 1876.

WE have read this work through with great pleasure. It presents, in a very interesting manner, the mode in which an orthodox thinker, endowed with an unusually clear and subtle intellect, views and meets the scientific doctrines of the present day. It is a vigorous protest against Darwinism, and is unquestionably the best criticism upon that theory that has yet appeared. Dr. Mivart is everywhere a consistent supporter of the dualistic as opposed to the monistic theory of the development of man—that is to say, he strongly upholds the view that man was from his very origin separated from the brutes by an impassable gulf. He admits that he is an animal, but holds that he is something more; that a reasoning soul essentially different from the cerebral activities of an animal has been infused into him by the Creator, and he even goes so far as to say that as the soul or activity of an ape differs in kind from the activity of a magnet, so does the soul or activity of man differ yet more in kind from that of an ape.

Commencing by a careful and well-sustained attack on the views of Spencer and Lewes, or, as he terms them, the Agnostics, whose arguments he pits against each other, he maintains in the strongest manner that we may trust our senses in regard to the existence of an external world, and that this world is not, as Mill considered it to be, made up merely "of permanent possibilities of sensation." He then proceeds to show what are the characters that distinguish man from animals, and places in the foremost rank language, which he divides into emotional and rational, pointing out, at the same time, the great ignorance and confusion that have existed in regard to the whole subject. Mr. Darwin, he says, in one place attributes the faculty of language in man to his having acquired a higher intellectual nature, whilst in another he ascribes his higher intellectual nature to his having acquired that faculty. Dr. Mivart himself considers it to be unquestionable that an absolute difference exists in the matter of language between man and all other animals; for whilst no brute gives any evidence of having any such faculty, it seems undeniable that all men possess that special bond and connexion between the world of mind and the world of matter—rational language. On the other hand, the signs of feelings and emotions—that is to say, merely emotional language—are the common property of men and animals. In the next place, he adverts to the recognition of the distinction between duty and pleasure, the conviction of moral responsibility, and the power of apprehending right and wrong, as being peculiarly human attributes, and he gives various instances, drawn from the lowest races, in which a distinct perception appeared to exist. From this Dr. Mivart passes to the consideration of the religious beliefs of the human race, which, he urges, are to be found, if properly sought for, in the very lowest, their irrational or distorted character, in many instances, being due to the fact that the races holding them have relapsed into barbarism, and that, like other branches of culture, religion has become degraded. It is remarkable, he observes, that neither in matters of religion nor in other kinds of knowledge is there any such difference of *kind* as might reasonably be expected to exist if man arose from different animals, at different periods.

Dr. Mivart deals with the subject of the origin of man from some broad-breast-boned ape with great felicity. Admitting, with Vrolik and Schröder v. der Kolk, that the lines of affinity existing between different primates construct rather a network than a ladder, he proceeds: "But it may be replied, the spontaneous and independent appearance of these similar structures" (various points in regard to the structure of the brain, teeth, liver, &c.) "is due to 'atavism' and 'reversion'—to the reappearance, that is, in modern descendants of ancient and sometimes long-lost structural characters, which formerly existed in more or less remote hypothetical ancestors. Let us see to what this reply brings us. If it is true, and if man and the orang are diverging descendants of a creature with certain cerebral characters, then that remote ancestor must also have had the wrist of the chimpanzee, the voice of a long-armed ape, the breast-bone of the gorilla, the chin of the siamang, the skull-dome of an American ape, the ischium of a slender loris, the whiskers and beard of a saki, the liver and stomach of the gibbon, and the number of other characters in which the various several forms of higher or lower primates respectively approximate to man. But to assert this is as much as to say that low down in the scale of primates was an ancestral form so like man that it might well be called an *homunculus*, and we have the virtual pre-existence of a man's body supposed, in order to account for the actual first appearance of that body as we know it—a supposition manifestly absurd if put forward as an explanation." This is undoubtedly strong criticism, and it is difficult to see how it can be answered.

In speaking of likenesses in animals and plants, Dr. Mivart discusses the remarkable phenomena of mimicry, and contends that so far from being the results of variations caused by external conditions, and tending to preserve the species by enabling them to escape the attacks of enemies, they result from an innate tendency implanted in certain races of animals and plants to assume the external semblance of creatures very different from them—a tendency the existence of which is to be explained by no mechanical conceptions, though in many instances the destructive agencies in nature must tend to keep true, and to intensify, such resemblances.

The doctrine of sexual selection is very ably handled, and the strictures made by Dr. Mivart on the frequency with which Darwin assumes the very position which he is endeavouring to prove, are acutely urged. We would remark, in passing, however, that Dr. Mivart entirely passes by the whole of the arguments derived from development which have been so prominently advanced by Haeckel and others, and which certainly have an important bearing on the relations of man to the lower animals.

Even Dr. Mivart, however, admits a kind of evolution, of which the formal law may be defined as "the continuous progress of the material universe by the unfolding of latent potentialities through the action of incident forms—i. e., through the interaction of its parts in harmony with a preordained end; such unfolding exhibiting a succession of changes from indefinite incoherent homogeneity to definite coherent heterogeneity."

It seems to us—we may be dull—that this only differs from Darwin's views (which we are quite willing to admit have been modified in regard to the influence of natural selection, partly, perhaps, owing to Dr. Mivart's own arguments) by the absence of any attempt to explain the causes which have led to the "unfolding" above referred to. The reason of the wide acceptance by scientific men of Darwin's theory, both here and in Germany, is that it affords a rational explanation of many of the phenomena observed, whilst Dr. Mivart's *Deus ex machina* reasoning, if pushed to the extreme, would effectually stop all inquiry. There is no question but that animals of the same species placed under different climatic or regiminal conditions begin to present differences which

become more marked in their offspring. Careful investigation will probably show how and why these differences arise, or have arisen in past times, and the discovery of the causes in operation is the main object of the Darwinian theory; but in Dr. Mivart's view God has pre-ordained it, and there is an end of the whole matter. To give an example. Dr. Mivart remarks:—"As an example of the hasty attribution of human qualities to brutes on account of certain superficial resemblances, we may take a sitting bird. It is no doubt true that the parent birds have keen parental emotions, yet a particular conspicuous act has had very undue weight assigned to it as a proof of such tenderness. What praises of the patient fidelity of the bird sitting on her unhatched progeny do we not meet with; and yet this constancy is said to be promoted by something very different from maternal tenderness! In truth a multitude of branching arteries and veins furnish such an abundance of blood to the bird's breast as to cause it to seek in the contact of the eggs a refreshing sensation. Cabanis and Dugés tell us that if a capon be plucked in that region which is naturally bare in a sitting hen, and if an irritating substance be applied to the part so stripped, then not only will the local inflammation cause the capon to seek the contact of eggs and to sit, but even to act maternally to the young when they come to be hatched." As we understand Dr. Mivart, it has pleased God to make a large plexus of vessels in front of the hen's chest in view of its sitting. Produce the same condition in a capon and it will sit too. Dr. Mivart attempts no explanation, but surely a reasonable interpretation of the phenomenon would be, putting aside the development of the plexus as being a result of gradual evolution, that there is a strong inherited propensity on the part of the capon to sit, which is only excited when the same conditions are produced as those which are usually in operation.

In his last chapter, entitled "Consequences," Dr. Mivart summarises the conclusions he has arrived at, and collocates a series of propositions representing the moral and religious teaching of Tyndall, Spencer, and Huxley, in which, however, we think he has made statements that may doubtless be deduced from expressions in the writings of these philosophers, but which, we believe, more than one of them would repudiate as representing their views as a whole. The whole chapter is wittily written, but is not, in our opinion, likely to establish a reconciliation between religion and science.

Dental Anatomy and Surgery. By H. SEWILL, M.R.C.S., L.D.S.

THIS manual is professedly written with the view of facilitating the labours of the dental student, and, inasmuch as its author lays no claim to originality, need not be hypercritically examined. The little information given is clearly conveyed; and some pains have been taken in condensing the results of recent investigations upon the development of the teeth by Waldeyer, Legros, Magitot, Tomes, and others. The great improvements recently made in microscopy have proved that the hitherto accepted views of Goodsir as to the existence of a papillary and follicular stage in dental development are somewhat incorrect, and it is now clearly demonstrated that the first change seen in connexion with the tooth-germs is an inflexion of the oral epithelium into the submucous tissue covering the jaw, the enamel organ being thus formed, whilst the germs of the permanent teeth are derived from the same epithelial process as that from which the deciduous tooth-germs originate. The chapter explaining these views, which is illustrated with diagrams, copied, we believe, from Legros and Magitot, is the only one worthy of commendation in the volume. We must express our surprise that the author should assert that the views he explains are new to England, and still more so that he has not given higher credit to his English *confrères*, who have not only made them known, but have supplemented them with important original observations.

The chapters relating to diseases of the teeth, and notably, to caries, are exceedingly meagre in detail; whilst the important subject of neuralgia, which so often has such intimate connexion with the fifth nerve, is very cursorily alluded to, no explanation being given of those reflex phenomena which are frequently associated with abnormal or diseased conditions of the dental structures, and we are astonished to see it stated that there are "no symptoms which distinguish neuralgia due to constitutional causes from that set up by local disease."

With every desire to do justice to the book, we do not think that it is particularly calculated to fulfil its object. The student who will carefully analyse for himself text-books like those of Salter and Tomes—the first of which is unexcelled in the practical character of its teaching and its lucid style—will derive far more benefit from adopting such a course than by seeking any royal road to the comprehension of his subject.

SPECIAL LOAN COLLECTION OF SCIENTIFIC APPARATUS, SOUTH KENSINGTON.

ON Monday this exhibition was thrown open to the public. It would be difficult to place too high a value on the effort it expresses. Whether the realisation will fully justify the project can only be determined after a more careful analysis of the collection than it is yet easy, or perhaps fair, to make. At the period when we write, the result is magnificent in the mass, but unsatisfactory in detail. There are regrettable faults in selection, in classification, and in the methods of exposition. Probably the worst defects are due to that most fruitful cause of feebleness and failure, indecision as to the precise aim and scope of an undertaking of this nature. If it was intended merely, in a general sort of way, to interest, and possibly to improve, the mind of οἱ πολλοι, the collection is open to the preliminary objection of being too crowded, and not so classed as to teach the relations, or, if we may so say, the progressive development, of ingenuity and research. The ordering and grouping of the specimens brought together are not natural. Other interests have swayed, and other objects have been sought, than those of illustration and instruction. If, on the other hand, the initial thought was to place within reach of students and teachers in the various branches of applied science a gallery of reference, suggestion, and inquiry, it is impossible not to feel that much valuable space has been wasted in the display of worthless or commonplace objects, of no practical interest; while specimens of apparatus and work which all must feel a keen desire to see are wanting—the hackneyed excuse, "pressure on space," being of course pleaded, in some instances (strange to say) backed by the more or less frank avowal that important matters have been overlooked, or, which is equally unpardonable, left to men too much preoccupied to see that the country was thoroughly searched for objects necessary to complete each department, and render the collection, as a whole, not merely an aggregation of scientific apparatus, but a scientific exposition of the instruments with which men of science work—illustrative at once of the means, the processes, the purposes, and the results of their labours. An exhibition inaugurated under the highest auspices, and in a severe sense representative, should certainly have satisfied these requirements. In so far as the collection on view is finally wanting in the

particulars we have indicated, it will be a matter of sincere regret, and one which can admit neither of extenuation nor excuse.

Turning to the two sections in which we are primarily interested, those comprising "Instruments employed in Biological Research" and "Chemical Apparatus and Products," we are glad to recognise the proofs of considerable industry in collecting, but sorry to notice somewhat striking omissions, and a general slovenliness in classification and display. It is impossible to suppose the projectors of these particular departments can have been misled by a desire to make the collection popular. The subjects illustrated are manifestly unsuited to, if not incapable of, popular treatment. Then why, we may venture to ask, squander the limited opportunity offered by a very niggardly allotment of space in exhibiting a number of microscopes, chiefly remarkable for being more or less complicated and costly, a score or two of models for botanical class teaching, whereof the ugliness is more apparent than the use, and a collection of anatomical effigies, which, taken as a whole, is probably as coarse and bad as anything of the kind to be procured from Paris or picked up in the slums of our own metropolis. There are two models, showing the nerves of the face and neck, which may possibly be worth exhibiting, but this is doubtful; while for the rest, the most that can in charity be said is that they exhibit collateral evidence of the extent to which ingenuity may be perverted and tactile skill misapplied. It would have shown some wisdom if the authority presiding over this department had treated the whole mass of models, not excepting those representing "blood corpuscles" five thousand times their natural size, and a wonderful "set of wax models to illustrate the development of the trout," as they have treated a certain edifying but not elegant series of pathological modelings—save only the pleasantry which has induced some one to append a large notice, describing the unfortunate series as "Apparatus for registering the growth of Plants." The same dry humour comes out strongly in labeling Dr. F. W. Spengel's craniometer—an interesting apparatus which will possibly be overlooked—"Skull of Crow." Of course the labels must have "got mixed." The wind had probably more to do with the result than wit. No doubt any "scientific person," as we were told on asking the name of something not labeled, "would know what it was;" but these wrong descriptions, which, if they show nothing more, are sad tokens of carelessness, do not convey the impression that the exhibition is well cared for, and we should be glad to see the state of matters mended.

If any such revision should take place, it might be well could time be spared to throw a little more light on certain objects at present only vaguely indicated. For example, "Apparatus for Muscles" (3794) is not either a full or lucid description of an instrument which, notwithstanding the circumstance that probably one in twenty average visitors may understand its nature and use, will be more interesting when it is explained. The present label seems to have been inspired by a profound contempt for ignorance, or, perhaps, may be designed to stimulate curiosity, like the familiar shop ticket, "Somebody's luggage." It is absurd to argue that there was not space in the catalogue or in the cases for fuller description. Nearly a page is wasted on the specification of "Models exhibiting the Anatomical Symptoms (!) of Cattle Disease," a collection so hideous and offensive that it has happily been hidden away under a side case. And it would be easy to point out pages literally squandered by the description of apparatus in regard to which no one will feel any interest who is not already well-informed, while objects so important as Geissler's "Mercurial Air-pump, for the analysis of Blood-gases" (3940), "Voit's apparatus for investigating the gases given off in the respiration of small animals" (3787), and not a few other apparatus of the greatest interest, are simply named, without one word of description or elucidation. We repeat, it would have been perfectly easy to make these matters plain. A few lines of simple statement appended to the several parts of these beautiful and complex apparatus would have placed the observer in a position to appreciate the objects before him, to his great gain, and without any extraordinary amount of trouble on the part of the officials entrusted with the duty of arranging the collection. There have evidently been many heads and hands at work, no doubt in concert; but—true to the universal experience when too many intellects are concentrated on the same enterpris—the result is more remarkable for disjointed excellence than harmonious perfection. Professor Huxley has contributed less than half a dozen pages on "Biological Apparatus" to the Handbook, apparently without seeing the collection. Other celebrities have arranged their own or other contributions by deputy, and the result is just what might have been expected. For example, what is called "the Marey Collection" is so placed that some of the objects must be overlooked or only imperfectly appreciated. The like misfortune will befall the collections—or rather, the student in search of information from the sight—of apparatus bearing the names of Hermann, Stein, Sommerbrodt, Weber, Donders, Handfield Jones, Burdon Sanderson, and other exhibitors. There may yet be time to clear up the cases, and set out the objects more carefully. If this can be accomplished before the exhibition is too far advanced, and if the collection is enriched at its weak points, we shall have no cause to regret speaking thus frankly. Is it too late to amend the classification so as to give it a less personal and more illustrative character? If the necessary changes can be effected it would be exceedingly convenient to find a progressive developmental classification of apparatus for indicating physical movements, under the head of "Recording Apparatus,"—which at present is the term applied to only a small group of instruments, whereas recording apparatus, properly so called, are scattered up and down the cases everywhere, in the most perplexing confusion. Apparently the confusion has proved too much for the authorities, as many of the objects are not yet labeled. They might arrange the sphygmographs, cardiographs, stethographs, and other instruments employed in clinical investigation, in a series, with some appropriate designation. It would not be difficult, for example, to suppose the case of a patient entering some public institution where he might be measured, weighed, tested for muscular power and for vision, his pulse, heart's action, respiration tested, and so on, with all the functions of the body. The apparatus for post-mortem examination would stand at the end of the series. It seems strange some simple guiding idea of this character did not occur to the gentlemen charged with the arrangement. There would have been no insuperable difficulty in working some generic notion out in detail. The materials are abundant; but we fail to find any method in the grouping. It is certainly not scientific. We defer a detailed notice of the objects on view, in the hope that something may be done to render the classification more satisfactory. Probably, no skilled visitor will fail to see much in the exhibition to admire. The physiologist will find apparatus of the highest character in his department of investigation; the clinician will recognise many instruments of great value in his researches; the ophthalmologist, the practical microscopist, and the general student, will be gratified by the discovery of interesting and admirably adapted appliances. The exhibition is rich in resources for pleasure and profit, although perhaps weaker in the Biological section than in many others. We would not be supposed to under-estimate the importance of the objects which have been collected. It is because we set a high value on the elements that we regret the unsatisfactory manner in which they have been thrown together without system or combination; and we urge a reconsideration of the arrangement so far as it may be possible, while the catalogue, which abounds in blunders, typographical and general, is "under revision."

THE LANCET.

LONDON: SATURDAY, MAY 20, 1876.

THE General Medical Council will meet, as our readers know, next Wednesday. Somehow or other, the meeting of the Medical Council is a matter of increasing interest and importance. The Council, it is true, does not do all that the profession has a right to expect from it, but it has done a good deal. It has raised in a very important degree the tests of the preliminary education of those entering the profession. It has done very much to improve the standard of medical examinations by the ordinary licensing bodies, and thereby to improve the character of medical education, though this is still lamentably unsatisfactory, if we may judge from the disastrous results of examination upon those who attempt the ordeal. The facts for the year 1875 are now before us. We find that at the College of Surgeons, England, in the first examination, while 511 passed, 256 students were rejected; in the final examination 369 passed, and 129 were rejected. In the first examination of the Irish College of Surgeons the rejections were just about half the number of those who passed, as in the English College. Thus, while 119 passed, 62 were rejected. At the Queen's University, in the first examination for the degree, the passed numbered 77 and the rejected 60. The rejections were still more numerous in the case of conjoint examination of the two Scotch Colleges, for while 50 passed the first examination, no less than 45 failed to pass. These figures tell a serious tale of the state in which a very large proportion of our students are found by the examining bodies. We have always maintained that modes of teaching were as much to blame for this as the students themselves. Be this as it may, we have justified our statement that while the Medical Council has done much to raise the standard of medical education and examination in this country, it has still a heavy responsibility in connexion with modes of teaching so inefficient as to leave a large proportion of the pupils unfit to pass the ordinary examinations. The Council is *par excellence* the Council of Medical Education. It remains to be seen whether it can thoroughly deal with the evil of ineffective teaching, irrespective of traditional prejudices. It is hard upon students to go on adding severity to the examinations and taking no corresponding steps to secure that teaching duties shall be performed with faithfulness and thoroughness. The facts concerning the results of professional examination come before the Council annually, and they certainly deserve more attention than they generally receive. The death of Dr. PARKES does not increase the chance of this most important of all subjects receiving attention from the Council. But the Council has already done so much to improve matters that its own reputation is concerned in doing more. And there is, happily, no lack of men in the Council who are capable of viewing the subject of medical education from an independent standpoint, and of carrying out those changes which were foreshadowed by PARKES, and the time for which everybody thinks has come. This question will be the more easily and naturally considered by the Council inasmuch as it will have before it, in formal order, the communications from the Licensing Bodies on the Reports of Visitors, and the Report of the Committee of the Council thereon appointed in June last. It will also have before it the Observations on the Recommendations and Opinions of the Medical Council from a number of licensing bodies. The fundamental question in these communications is that of medical education, as tested by the results of professional examinations in the three divisions of the kingdom. In connexion with this subject it is probable that the question of the special and separate teaching of Therapeutics will arise. It is curious that, up to this time, therapeutics have been taught only in connexion with materia medica, which is about as reasonable as it would be to consider the question of phlebotomy in connexion with the last form of lancet. Drugs constitute a mere part of the *armamentarium* of the physician, and it is immensely important that therapeutics should be taught separately to the advanced student, when he begins to realise the nearness of the responsibility of having to treat disease. This is the more reasonable as therapeutics are now taking a scientific form, and we are beginning to see more definitely that we can do much for the mitigation of suffering, and even for the shortening of diseased processes.

It is yet uncertain whether the Conjoint Scheme for England will appear before the Council. The probability is that it will. If it does not it will be conspicuous by its absence after all the expectations that have been raised about it, and the Council would be entitled to inquire into the position and prospects of the scheme. The irrepressible "women's question," too, will come before the Council, as we have already intimated, and various other matters of interest. But, in our opinion, the Council will magnify its office best by giving its chief attention to the questions raised by the various communications from the teaching and examining bodies in view of the table of results of professional examinations. Changes in other departments of medical authority, taken in connexion with a noticeable disposition on the part of Government to consult the Medical Council, make us desirous to see the Council magnify itself as a Council of Medical Education.

DR. BUCHANAN'S report on the late prevalence of enteric fever in Croydon, which has just been made public, is of great interest. Much attention was attracted at the time to this prevalence, from its occurrence within an area which for a quarter of a century had had presumably all the advantages of efficient sewerage, an excellent and pure water-supply, and good sanitary administration. The occurrence, in twelve months, of some 1200 cases of enteric fever, of which 90 were fatal, under such conditions, was an event of the gravest moment, and seemed to render doubtful some of the fundamental principles upon which sanitary measures are founded in this country. It was fortunate that the event happened in a community which is rich in medical and engineering talent, and that thus the details of the prevalence, and of the conditions under which it occurred, were subjected to a minute local study rarely to be obtained.

It was equally fortunate that the local authority, recognising the exceptional nature of the prevalence, were not willing that it should be dealt with as a matter of local interest alone, and asked from the Local Government Board that it should be made the subject of an official inquiry by one of the Inspectors of that Department. The request was granted, and Dr. BUCHANAN was deputed for the task. The inquiry proved to be one of unusual complexity, and it is not improbable that, in the first instance, the results may be regarded with some disappointment. The general characters of the prevalence, particularly as to localisation in time and space, suggested at first a uniformly acting cause of distribution, whatever this might be. But Dr. BUCHANAN'S inquiry sets aside definitively this inference, and shows that the prevalence was caused by a series of conditions which (except in one instance) have not even the poor merit of being novel or exceptional, but are of the most commonplace description. The great value of the report, indeed, consists in showing the essential importance of the just execution of what we may venture to call the commonplace details of sanitary works, if these are to be other than shams.

The prevalence of enteric fever was limited to the sewered parts of Croydon. The town is sewered on the small calibre system, its largest new sewers not exceeding twenty-four inches diameter. The air in such sewers is apt to be dangerously confined, and is liable to be displaced by slight causes which would hardly affect the air in larger sewers. If ample provision is not made for the diffusion of the sewer air outside the houses, it will be diffused into them. Croydon, notwithstanding previous lessons to this effect, has made very imperfect provision, both public and private, for preventing the diffusion of sewer air into dwelling-houses. The sewer ventilation is largely insufficient, and many houses are without any proper safeguard against the passage of sewer air into them. Given sewers of the kind here described, infected with enteric fever poison, there is no difficulty in understanding how the disease would become developed along their ramifications. Dr. BUCHANAN does not enter upon the questions of the first beginning of the enteric fever in the town, and of the conditions which determined its peculiar infectiousness in the late prevalence. He confines himself to the question of the causes determining the distribution, and he found, in fact, that the disease had for the most part picked out those very houses in the sewered area into which sewer air could find admission, and left untouched those houses into which it could not penetrate. He found also that the disease had manifested a preference for the houses so circumstanced situated in the higher portions of the town, where, from their elevation and the steeper gradients of the sewers, the liability to diffusion of sewer air into the interior of buildings is greater. He attributes, indeed, the determination of the greater portion of the fever to the simple fact that the ordinary precautions for cutting off the direct communications of the sewer with the house-drains had not been adopted in the houses where the disease manifested itself.

But this commonplace defect did not explain all the phenomena of the prevalence. Groups of cases occurred which were certainly not due to defects of house-drainage, and which appeared to be connected with the water-supply. At first, indeed, the area of prevalence of the fever corresponding very closely with that of the town's water-supply, it was thought that the general supply must have become fouled with enteric fever poison. This, however, it is now known, could not have been the case. How, then, can we account for local prevalences of the disease apparently connected with the water-supply? The portion of Dr. BUCHANAN'S report which deals with this question is of great value. The water-supply of Croydon is, after a fashion, continuous. Dr. BUCHANAN shows good reason for the belief that the water-pipes have, in places, such relations with the sewers that, during intermissions of the service, sewage may be sucked into the water-supply. But he also shows that the same untoward result may occur the pipes running full, and he adds an important note upon the conditions under which this happens. We are not aware of any previous attempt to determine this question, and Dr. BUCHANAN'S observations upon it should have the careful attention of all who have to deal with water- and sewerage-works. There appears to be little doubt that local pollutions of ramifications of the water-supply from in-draught of sewage played a part in the Croydon outbreak.

The great practical value of Dr. BUCHANAN'S report consists in showing that the distribution of enteric fever in Croydon during the late prevalence was mainly the result of imperfections in its arrangements for drainage and water-supply, and that these imperfections were neither mysterious nor novel, but were essentially commonplace, depending upon the neglect of well-understood principles of sanitary work.

THERE is a widespread wish, and a well-intentioned though perhaps not wholly practical effort in progress, to establish sound working relations between psychology and physiology. It is manifest that such a correlation must form the basis of any rational system of mental medicine. Patients suffering from mind and brain disease may recover, but they cannot be scientifically "cured," scarcely can it be said that they are intelligently treated, unless the interconnexions of mind and the physical organism are understood, at least so far as to elucidate the causation of physico-mental phenomena and make plain the simpler processes by which the organs of thought and force mutually react upon and influence each other. It may be objected that the interdependences of mind and body are so subtle as to elude the researches of the most diligent inquirer; that, in fact, such knowledge is too vast for the present grasp of science, and its pursuit so speculative, if not visionary, as to place it beyond the province of practical physic. We venture to think this not unnatural but erroneous impression is one of the most formidable obstacles which blocks the path of progress. The labours of zealous observers have been rewarded by the discovery that almost every form of mania may be directly symptomatic of organic disease, the collateral consequence of functional disturbance, or the reflex formulation of a perverted sensibility. Even delusions are in most cases distinctly traceable to physical causes under one of the methods of causation just indicated. The facts collected, and in a loose fashion collated, in connexion with mental disease, are eminently

suggestive. They clearly point to a system of pathology in no sense different, or, even in thought, separable, from that which the labours of anatomists, physiological chemists, and physical explorers generally, have constructed. There is no boundary line between disease of the body and derangement of the mind. The one shades off into the other, and both are, more or less obviously, interdependent. It is a simple corollary of this fact that the laws of health and normal activity in body and mind—the subjects of psychology and physiology—must stand in such close relation that to study them apart is to do violence to the harmony of nature; while to ignore the claims, the influences, and the necessities of either while attempting to prosecute an independent investigation of its counterpart must not only be to risk disappointment, but to dare the peril of being seriously and even disastrously misled. Strangely, many able students and practitioners of medicine do not perceive the natural and indissoluble bond which holds these two departments together; and hence the attempt to maintain a specialty which can have no independent existence, on the one hand, and an almost total neglect of the rich and singularly productive province of mental symptomatology on the other. Bodily disease, organic as well as functional, may express itself in the mind. Mental disease may, and not unfrequently does, produce its recognisable effects in the body. In the endeavour to separate these two departments of fact and inference the integrity of each is impaired. It would be needless to urge these truisms if it were not apparent that they are too commonly forgotten or overlooked. An attempt to treat bodily disease by exclusively physical remedies, or, more precisely, by drugs and appliances whose action is exclusively physical, would be not less unreasonable than the endeavour to cure or relieve morbid states of the mind by methods wholly mental. The two classes of remedies mingle and blend with each other, like the diseases they are designed to combat and remove. It is difficult to affirm of any method or expedient by which a morbid condition can be removed or mitigated that its operations are either wholly physical or purely psychical. Mental impressions produce physical effects. Modifications in the force and frequency of the heart's action, alterations of blood-pressure and tension of the arteries and arterioles, are coarse results, which may be produced almost indifferently by influences acting through the mind or directly on the organic nervous system. In the light of these considerations, it is clearly of importance to define what precisely is meant by "the physiological treatment of insanity."

The belief that abnormal states of mind frequently, if not always, stand in close relation to morbid conditions of body, is daily gaining strength. The professors of "mental medicine" are, in fact, retiring from the untenable position in which they once sought to place their specialty, and tacitly conceding the argument that it is no separate or separable department, but a simple extension of the province of pathology, the full fruit of which can be gathered only by those who recognise its true character as an integral portion of general medicine, in which the properties and functions of body and mind must be studied in their most intimate relationship. "Physiological treatment of insanity," properly interpreted, means something more than the physiological treatment of bodies that happen to be associated with unsound minds: it is the treatment of insanity as a product and symptom of physical disease. This is the sense in which the phrase is daily gaining wider acceptance as the embodiment of a definite practical thought. It is by the restoration of psychological medicine to its proper place in the great arch science of physiological physic that we hope to see its relations with physiology established on a clear basis. We hail the movement, of which this familiar but hitherto not very intelligible expression is the watchword, as a most healthy reaction. It is one in which the whole profession has a vital interest, and from which it may expect the best practical results. It may be helped forward by a resolute endeavour to work out the relations of cause and effect in every case of abnormal mental phenomena. We hold the connexion which Dr. MAUDSLEY has done so much to establish between kleptomania and general paralysis to be an important step in the right direction. The recent development of opinion on the subject of aphasia marks another point gained. If those who seek the reunion of psychology and physiology would work on the same lines, they might advance the movement, and attain with greater celerity sound practical results.

Annotations.

"Ne quid nimis."

THE CONJOINT EXAMINATION SCHEME FOR ENGLAND.

THE latest accounts would seem to justify a hope that there is still a chance of the Conjoint Scheme coming into existence. On Monday last the Scheme was adopted pretty unanimously by the College of Physicians. This result was to be expected under the auspices of the new President, Dr. Bennett, who has always been a faithful supporter of the conjoint principle. The Society of Apothecaries has intimated its adhesion to it. The University of Oxford has accepted it. It remains to be seen whether, under these circumstances, the University of Cambridge will withhold its assent. The Syndicate appointed by the University to consider the Scheme, as we said last week, was not prepared to recommend it to the University. But the Syndicate may change its mind, or the University, in view of the general acceptance of the Scheme by all the corporations interested and by the University of Oxford, may, after all, think it right to fall in. If Cambridge still holds aloof, the Scheme may yet be carried out without her, which we should regret, for Cambridge has shown a very kindly and intelligent interest in medical matters of late years. It is easy to find fault with this as with all conceivable schemes for a conjunction of so many bodies with such various interests. But the way to reduce the evils of any possible scheme is to become a party to it, and so gain the right and power of helping to make the best of it. The University of London has not yet considered the Scheme. From all accounts there is likely to be some opposition to its adoption. It is certainly a responsible thing for the Universities to raise difficulties when the corporations concerned are all satisfied. If conjunction of boards is to be attempted, the time seems now or never. We are not at all sanguine of success, but the experiment should be tried.

CAUSES OF DEATH AND INQUESTS.

THE meaningless verdicts which are still returned in so large a proportion of inquests, together with the worthless information as to uncertified causes of death which is so often inserted in the death register, considerably detract from the value of mortality statistics as a means of comparing local death-rates from different classes of disease. By Section 16 of the Births and Deaths Registration Act of 1874 a coroner is bound to "send to the registrar, within five days after the finding of the jury is given, a certificate under his hand giving information concerning the death, and specifying the finding of the jury with respect to the said particulars and to the *cause of death*," &c. This appears clearly to imply that the jury should, in their verdict, declare, in accordance with the evidence, what was the cause of death, and that their verdict should form part of the coroner's certificate, in order that it may thence be entered in the death register. It is a fact, however, which is being continually commented upon, not only by the Registrar-General, but by medical officers of health in all parts of the country, that a large proportion of inquests are utterly useless as a means of ascertaining the cause of death, for which the death register is entirely dependent upon the coroner's certificate. Such verdicts as "natural causes," "visitation of God," "sudden death," "accidentally killed," "accidental death," &c. &c., are still returned in a large proportion of cases, and are not only valueless for statistical and sanitary purposes, but afford the strongest evidence of the waste of the public money which defrays the cost of these worthless inquests. In eighteen per cent. of the inquests held in the city of Norwich during the first three months of this year the cause of death was returned as "natural causes," which words were in each case entered in the death register as the only indication of the cause of death. Dr. W. N. Thursfield, the medical officer of health of a combined sanitary district, situated principally in Shropshire, points out in his annual report of 1875 that in 8·4 per cent. of the deaths registered in his district during that year the cause of death was uncertified. With these uncertified deaths Dr. Thursfield had been compelled to include no less than 54 inquest cases in which "causeless verdicts" had been returned. In the present day, when so much time and money are expended upon the compilation of sanitary statistics, such barren results from the heavy expense involved in holding inquests should no longer be tolerated.

INFECTIOUS DISEASES.

THE North-Western Association of Medical Officers of Health have addressed a memorial to the President of the Local Government Board on the subjects of registration of diseases, especially infectious diseases, and the need of compulsory measures being adopted for obtaining information regarding the latter. The memorial sets forth that a necessity exists for a system of registration of diseases, particularly of such diseases as are of an infectious nature. It further states (much to the astonishment of Mr. Sclater-Booth, we should imagine) that the members of the Association are "most especially concerned" with dangerous infectious diseases; then, after noting that, in view of arresting the spread of these diseases, it is of importance the sanitary authority should have early information as to their occurrence, it expresses the opinion that it should be made compulsory for "registered medical practitioners and householders to report all cases of dangerous infectious disease to the local sanitary authority, in order that the local executive may take such measures and give such advice as the exigencies of the case may require." We are loth to say anything which may appear to depreciate efforts for the limitation of dangerous infectious diseases, but we demur wholly to the view of the medical officers of health as to infectious diseases suggested in this memorial. Important, in reference to his practical and ordinary duties, as the control of infectious diseases may be, to speak of them as if they excluded or were of supreme importance as compared with other fatal diseases, is in our opinion a grave misconception of the medical officer of health's functions in respect to diseases. No doubt, in the north-western districts, particularly the urban, infectious diseases play a prominent part among the fatal diseases. But that they include the whole of the preventable diseases which it concerns the medical officer of health to deal with is a sheer assumption. The almost exclusive attention which is being given to infectious diseases by medical officers of health, as if these were the finality of medical preventive knowledge and of disease in its hygienic relations, is, we are convinced, exercising a most prejudicial effect upon the position of the medical officers of health. We demur also to the notion that the medical practitioner should be called upon compulsorily to give information as to dangerous infectious sickness in his practice, or, as here proposed, that he should operate as a check upon the householder giving this information. A position so utterly inconsistent with the relations which obtain between doctor and patient in this country could not be justified without much stronger evidence of its being beneficial to the public good than yet exists.

OFFICIAL SELF-SUFFICIENCY.

CORONERS have been recently so perverse that few vagaries of the official mind would surprise us. We must, however, confess to having been astonished by the proceedings of the Coroner for the Eastern Division of Surrey. Mr. Carter apparently labours under the misconception that the whole function, and all the powers, of inquest are concentrated in his own official person. He believes himself to be judge, jury, and summoning officer combined in the individuality of the Coroner for East Surrey. That extraordinary delusion, for such it is, has induced this gentleman to refuse a jury the evidence it formally required, and, in a word, to bring an important inquiry to a summary conclusion before its legitimate limits had been reached, or the grounds of a just return properly investigated. We have dealt with the inquiry itself elsewhere; our present concern is with the mode in which it was conducted, or, to speak plainly, *stopped*. We have no wish to place a hasty construction on the proceedings of coroners; on the contrary, we deem the office of considerable social value, and, above all things, desire that it should be upheld; but to this end the office-holder must contribute. It is impossible the Court should be long maintained as a public institution unless its proceedings are most carefully conducted, and its powers judiciously administered. It is useless to disguise the conviction that this has hardly been the case in recent experience. We can have no hesitation in expressing a strong persuasion that the Coroner for East Surrey as far exceeded his powers in refusing to call the witness designated by the jury in the Balham case as he departed from the practice laid down by precedent, under circumstances identical with those which have occurred before. We can only characterise the course pursued by Mr. Carter as one unparalleled for eccentricity and altogether inexplicable. The result is a miscarriage of justice which perhaps nothing can retrieve, and certainly it would be impossible to excuse. Dr. George Johnson informs us that he took the trouble to attend the inquest, and when he saw that the Coroner was about to sum up for a verdict of suicide, he gave him his (Dr. Johnson's) name, and expressed his wish to give

evidence, but the Coroner declined, and said that no further evidence was necessary. The Act applicable to this case is 6 and 7 Will. IV., c. 89, s. 2, which runs as follows:—

"And be it further enacted, that whenever it shall appear to the greater number of the jurymen sitting at any coroner's inquest that the cause of death has not been satisfactorily explained by the evidence of the medical practitioner or other witness or witnesses who may be examined in the first instance, such greater number of the jurymen are hereby authorised and empowered to name to the coroner in writing any other legally qualified medical practitioner or practitioners, and to require the coroner to issue his order, in the form hereinbefore mentioned, for the attendance of such last-mentioned medical practitioner or practitioners as a witness or witnesses, and for the performance of a post-mortem examination, with or without an analysis of the contents of the stomach or intestines, whether such an examination has been performed before or not; and if the coroner, having been thereunto required, shall refuse to issue such an order, he shall be deemed guilty of a misdemeanor, and shall be punishable in like manner as if the same were a misdemeanor at common law."

This statutory provision, which is in full force, deserves to be better known, and more frequently acted upon.

STIMULANTS IN WORKHOUSES.

THE Wrexham Union has suddenly become famous for a teetotal experiment, not upon the guardians, but upon the paupers of the workhouse. *Fiat experimentum*, &c., of course. A correspondence on the subject between the guardians of the Wrexham Union and the guardians of St. George's Union, Middlesex, has been published as a return to an order of the House of Commons. From this, and especially from the letter of Dr. Davies, the medical officer to the Wrexham Workhouse, it is to be gathered that the guardians and the medical officer, and even the paupers themselves, are delighted with the system under which alcohol is entirely disused by the inmates, either as a daily beverage or as a medicine in the treatment of sickness. We should perhaps not have noticed this subject but for our great interest in it, and for the sanction given to a grave experiment, and what appears to us very questionable conclusions by the doctor. We have a clear conscience as regards the medical use of alcohol in disease. We have watched with great interest experiments of teetotalism in arctic and tropical regions, and in the various conditions of life. And we are greatly interested in the Wrexham experiment on the effect of abstention from alcohol on the estate of pauperism. Only we are anxious that it should be rightly made and rightly construed. The facts are too limited at present to justify any conclusions, except the conclusion that the authorities of the Union, including, we are sorry to say, the medical officer, have misconstrued the chief lessons of the experiment, so far as it has gone. It is clear that the guardians are saving by the disuse of alcohol more than £100 a year. To set off against this is an expenditure of £12 or £15 a year more on eggs, and a few shillings more on beef-tea. Another fact in the account favourable to the guardians in the three years of the non-alcoholic system, as compared with the three preceding, is a diminution in the number of paupers, as if this change had a deterrent effect. But the one conclusion not borne out by the facts is that the mortality is less in the non-alcoholic period. Dr. Davies says the mortality for this period was 35¾, against that of 41¾ for the years in which alcohol was given; but he does not mention the vital fact that the average number of inmates in the alcoholic time was 271, as against 214 in the non-alcoholic. When this difference is considered in connexion with the number of deaths, it turns out that the mortality in the non-alcoholic period was 16·24, and 14·5 in the time when some stimulant was allowed. Moreover we must add that the mortality in specified forms of disease treated on the non-alcoholic system is not *nil*, nor so near *nil* as to prove much in its favour. Thus 8 cases of scarlet fever were cured and 2 died, 3 cases of pneumonia were cured and 1 died, 3 cases of erysipelas were cured and 1 died. It is true that of 8 cases of typhoid, all got well; and of 30 cases of measles, all got well. But these bare facts prove nothing. Then, as regards the mortality of people over sixty, it is in favour of the alcoholic period, for in the three years, with an average number of inmates of 271, there were on an average 67 deaths, while in the non-alcoholic period, with an average of 214 inmates, there were on an average 62 deaths. In other words, in the alcoholic period the mortality of people over 60 was at the rate of 8·34 per cent. of the number of inmates, and in the teetotal period at the rate of 9·64 per cent. We cannot accept this correspondence as a very valuable contribution to what we regard as a serious question; and we would suggest that if old and enfeebled paupers in sickness are to be deprived of all alcoholic stimulant, they must be treated with more liberal quantities of beef-tea than are represented by an expenditure for three years respectively of 5*s.* 2½*d.*, 10*s.* 6*d.*, and £5 10*s.* 3*d.*, the amounts spent on beef-tea as a medical extra in the years 1873, 1874, and 1875. No wonder that the mortality went up. This is not the way to help the cause of either teetotalism or moderation in the prescription of alcohol by medical men, which we have much at heart.

CHARITY A LA MODE.

WE gather from statistics summarised in a circular just issued by the Charity Reform Association that, in round numbers, there are some 30,000 blind persons, of all ages, in the country needing assistance in the shape of training and support. Of this multitude London is responsible for about 3000. The charitable institutions appropriated to this specialty number only 53, and in the aggregate they do not provide for more than 2279 sufferers. Nor is the work carried on with all the vigour the case demands. The energy is unequal. In Scotland five institutions sold goods made by the blind to the value of £21,930, while in England forty institutions produced and disposed of industrial articles to the amount of £33,598, and Ireland lagged so much behind that it gained only £454. It is further alleged that not only are the institutions generally ill-managed, but the training given to their inmates is so defective that they are unable to turn their education to account and become self-supporting. Something like £400 per head seems to be expended at certain institutions, with the result that only about 25 per cent. of the beneficiaries are ultimately capable of earning a livelihood. This state of matters is certainly most unsatisfactory. But the case is even worse than it appears at first sight, because what these charities are attempting, and so imperfectly, is work which ought to be done by the State, and for its performance ample provision has been made by repeated Acts of Parliament. As a matter of fact, guardians of the poor are empowered and enjoined to educate all blind, deaf, and dumb poor persons, without making them paupers. If the committees of these institutions could lay aside their rivalry, and combine to demand a capitation grant, the claim could not be resisted, and the whole system of training and employment for their pensioners would be placed on a new and better footing. What stops the way of this and many other useful and necessary reforms is the rage for charity *à la mode*, with the paraphernalia of contested elections, patronage, voting papers, and periodic appeals to that weak sentiment

of kindness which needs a liberal supply of stimulus for its support. We do not in every respect agree with the views and objects of the Charity Reform Association, but it is doing good service in calling attention to the monstrous condition of matters we have just noticed. The time has certainly arrived when the public must be asked to consider whether it would not be more economical and expedient to compel boards acting under the Poor-law Amendment Acts, and the Local Government Board as central authority, to exercise the powers conferred upon them, instead of leaving volunteer committees of charities to do that imperfectly which might be done more effectively, and at considerably less cost, as the law directs.

TRANSPORT OF SICK AND WOUNDED BY RAILWAY.

RAILWAYS and telegraphs have revolutionised the art of war. Not only can the expenditure of time and energy be economised in many obvious ways, but railways have brought up and emptied fresh troops on the battle-field whilst the battle was going on; and no one would now neglect, even on such an occasion as our autumn manœuvres, much less in actual warfare, to make use of railways for evacuating the field hospitals and for transporting the sick and wounded to other and distant hospitals. The best method of transporting wounded men by railway under such circumstances has engaged a very large amount of attention on the part of continental nations, America, and ourselves. M. Zavodovsky, of St. Petersburg, has invented a very ingenious, inexpensive, and simple method of adapting the ordinary freight-cars or baggage-vans for this purpose. It is very difficult, without aid of the sections which illustrate M. Zavodovsky's pamphlet, to render any description of his method clear and intelligible; but it consists in suspending strong cables across the cars near the roof, to which strong but springy wooden poles are attached adapted to the width of the car. To these poles, placed horizontally across the car, four stout cords are attached—two on either side—so as to hang down vertically and leave an interval between every two cords wide enough for a stretcher to be inserted. The cords are knotted and looped so as to admit of the poles of the stretchers being securely placed in the loops of a neighbouring pair of cords, one stretcher above and one below. In order to guard against the swaying of the stretchers when the patients are upon them and the train is in motion, the lower stretchers are fastened by inch and a half ropes to three small iron hooks screwed into the floor of the conveyance. A longitudinal passage is left in the middle of the car or van between the sets of stretchers on either side. A vehicle of this description, according to its inventor, has been submitted to the scrutiny of experts, who had served in the late wars in Russia, Austria, and Italy, and they have unanimously verified the fact that, apart from the simple and practical nature of its preparation, it provides the patients in journeying with an equable and comfortable method of transport. We understand that M. Zavodovsky's invention has been practically tested in this country, and has been found to answer all reasonable expectations. It was feared that the oscillation, both lateral and longitudinal, and the yielding of the extremities of the poles (which are thinner than the middle portions), would prove insuperable objections, but such has not been found to be the case. Each freight-car is intended to convey eight wounded men in this way, and allow room for the movements of the orderlies in attendance to get at the patients. The method, of which the preceding sketch affords but an imperfect outline, is fully set forth by its inventor in his pamphlet, to which, and to Assistant-Surgeon Otis's eport on a Plan for Transporting Wounded Soldiers by Railway in Time of War, with descriptions of various methods employed for this purpose on different occasions," issued by the War Department, Washington, we are indebted for our knowledge of M. Zavodovsky's ingenious and practical contrivance.

THE EDINBURGH GRADUATES' CLUB.

THIS club had its quarterly dinner on Monday evening. There has never been a more successful or pleasant gathering in the whole history of the club. The chair was fitly occupied by the President of the College of Physicians, the club being not a little proud of the fact of one of the alumni of its university being, for the first time, President of that College. The guests were distinguished, viz.:—Sir James Paget, Bart., F.R.S., and President of the Royal College of Surgeons; Major Wilson, R.E., Palestine explorer; Vice-Admiral Inglefield, C.B., F.R.S.; and Mr. Winter Jones, Librarian of the British Museum. The speeches were, as may be supposed, more than good. While Dr. Bennett claimed for the Edinburgh University high praise as a school of "Medicine," in the restricted sense of the word, Sir James Paget acknowledged the modesty of the claim, and hastened to say, in his own felicitous way, that Dr. Bennett need not have hesitated to claim equal praise, as a school of surgery, for a university which had enjoyed the presence in their early days of Liston and Fergusson, throughout almost his whole life of Syme, and at the present day of Professor Lister. The Army and Navy were most ably represented by Major Wilson and Vice-Admiral Inglefield. The attendance was good, and the graduates parted delighted with their Alma Mater and her reputation.

THE PLAGUE.

THE news we last reported of the plague represented the disease as decreasing in Bagdad and Hillah. Cases were reported from Nedjef, on the borders of the Syrian desert, and from Kut-el-Amarah, below Bagdad, on the Tigris; but, so far as could be judged, there seemed some reason to hope that the ground of extension of the disease for this year was approaching to an end. It would now seem that, so far from this being the case, the disease has undergone a considerable increase in both Bagdad and Hillah; it is to be feared also that it is more widely spread in the vicinity of those towns than had previously been suspected, and, it is rumoured, according to a telegram received on the 15th inst., and which had been transmitted from Calcutta the day before, that the malady has appeared at Mascat. If Mascat be infected it is unlikely that other portions of the littoral, especially the western, of the Persian Gulf and the Gulf of Oman will have wholly escaped. The latest detailed news from Bagdad is for the period from the 16th to the 22nd of April; from Hillah for the same period. The preceding news related, for Bagdad, to the period between the 28th March and the 1st April, and for Hillah between 27th and 31st March. What has become of intervening details is not known, but it is not unlikely that the Ottoman Government has been unwilling to make known earlier than was unavoidable the unpleasant fact of the increasing prevalence of plague in Mesopotamia. The deaths from plague stated for the two periods referred to in Bagdad and Hillah are as follows:—Bagdad, 28th March to 1st April, 75 deaths; 16th to 22nd April, 336; Hillah, 27th to 31st March, 42; 16th to 22nd April, 159. The *Levant Herald* of the 3rd inst. states, from private information, that 11 deaths from plague occurred at Nedjef from the 16th to the 21st April; 7 deaths at Imam-Mousa (a village within an hour's distance from Bagdad) from the 15th to the 19th. The infected places in

Mesopotamia are included within a sanitary cordon, outside which it is stated no instance of plague has occurred. The rumour from Mascat comes unfortunately to shake faith in that statement.

The increasing prevalence of plague in Bagdad, and its rumoured appearance on the Arabian littoral, seem to have caused some uneasiness in Western India, and stringent measures of quarantine have been adopted against the suspected coast and the head of the Persian Gulf.

THE HEALTH OF OUR ARMY AT HOME AND ABROAD.

THE amount of sickness, mortality, and invaliding in the British army at home and abroad during the year 1874, as compared with the average of the previous ten years, according to the last published statistical report, is as follows. The calculations are based on an annual ratio per 1000 of mean strength:—The admissions in the United Kingdom in 1874 were 840·7, the deaths 8·79, and the invalids discharged 29·66 per 1000 respectively, as compared with an average for ten years of 845·1 admissions, 9·17 deaths, 28·47 invalids per 1000. In Malta and Gibraltar the deaths in 1874 were 7·27, as compared with 11·12 per 1000 in previous ten years. In Canada and the Bermudas the admission and death rates were less in 1874 than the average for the previous ten years. In the Mauritius, the death-rate, though still high, was below the average; and at Ceylon the admission, death, and invaliding rates were considerably lower in 1874 than during the previous ten years; the number of troops at these stations being small, however, fluctuations are very liable to occur. In India the admission-rate in 1874 was 1333·6, the death-rate 14·22, invaliding-rate 40·19 (of which 9·41 were discharged) per 1000 of mean strength, as compared with an admission-rate of 1461·9, death-rate of 24·22, and invaliding-rate of 43·56 (of which 17·90 were discharged as invalids) per 1000 for the average of the ten years from 1863-72.

A FATAL HOUSEHOLD EPIDEMIC.

AT a recent meeting of the Liverpool Health Committee, reference was made to an outbreak of diphtheria in the family of Mr. Councillor M'Ardle, and it was resolved that action should at once be taken to ascertain the sanitary condition of the house and its immediate neighbourhood. The following are the particulars, as far as we have been able to ascertain them, regarding the lamentably fatal occurrence in question:—It appears that on April 21st and 22nd, two sons of Mr. M'Ardle, aged eleven and fifteen years respectively, died from diphtheria. It is alleged that no information in reference to these cases reached the medical officer of health for Liverpool until May 1st, when a notice of the deaths arrived in the usual way from the registrar of the district in which they occurred. The medical officer of health at once ordered the drains to be flushed, and an inspector was sent to Mr. M'Ardle's house to disinfect it, and remove, for the purpose of disinfection and fumigation (at the expense of the Health Committee), all the soiled clothing and bedding. The wishes of the sanitary authorities were not, however, complied with, on the ground that all proper precautions had been or were being used. The bedding and clothing of the deceased were believed to have been washed at home—a proceeding which appears to have attracted the attention of Mr. M'Ardle's neighbours, who complained to the health authorities of the clothes being hung in the air to dry. On May 7th Mrs. M'Ardle died of diphtheria; on the 9th of the same month an infant son, aged seven weeks, died; on the 10th a daughter, aged four years, died; and, on the same date, another daughter, aged fifteen years, succumbed—all of diphtheria.

We are given to understand that no direct information was afforded, from first to last, of this terrible outbreak to the sanitary authorities, and when the subject indirectly came before them, their proffered aid in effecting a thorough disinfection seems also to have been set aside. Such a bereavement as this is, of course, of a most distressing character, and the lesson to be learnt from it is that prompt and efficient measures, in the interval after the occurrence of the first two deaths on May 1st, might at least have prevented some portion of the terrible mortality and family desolation that followed.

And, unfortunately, the above loss of Mrs. M'Ardle and five children by diphtheria is not all, for we learn from the *Liverpool Mercury* of the 17th inst. that "the remainder of the family, consisting of one son and two daughters, were removed from Mr. M'Ardle's residence in Everton to Holywell, in the hope that a change would preserve the rest of the children; but news was yesterday received that the only surviving son had died, leaving Mr. M'Ardle with but two daughters out of a family of eight children. The greatest sympathy is felt with Mr. M'Ardle under the almost overwhelming bereavement with which he has been thus visited."

THE DRINK QUESTION AND THE GOVERNMENT.

IT is very gratifying to notice that no Government can rely on the support of the House which does not face with courage and gravity any reasonable proposition for restricting drunkenness in the country. Apart from all questions of party, the defeat of the Government on the question of Sunday closing in Ireland was most significant and satisfactory. If the Irish people are before us in their shame at the amount of national drinking, and think to begin a better state of things by Sunday closing, all honour to them. By all means let them try the creditable experiment. The most discreditable thing which this Government has done is to have extended the hours of drinking to please the publicans, so that working men may have drink early in the morning on their way to work, and may drink later at night than when the present ministers came into office. This is an almost ineffaceable stigma, and the vote of Friday looks as if even Conservative members were repenting, and anxious by some other legislation to make amends. If the Government is wise it will try to put itself right on this very serious question. It must elect between serving the public and pleasing the publicans.

HOSPITAL PROVISION FOR INFECTIOUS DISEASE IN MACCLESFIELD.

THE medical officer of health for Macclesfield (Dr. George Bland) has recently had to report to the Town Council an outbreak of small-pox in various parts of that borough, and took occasion to remind the sanitary authority that the borough is still unprovided with a hospital for infectious diseases. The want of such an institution in Macclesfield was pointed out by Dr. Bland in 1873, and has since been urged upon the Town Council by the Local Government Board; the borough, however, now finds itself unable to cope successfully with an epidemic of small-pox, probably imported from Manchester or Salford. Isolation, which can seldom be successfully carried out except in a hospital, is more absolutely necessary for the repression of small-pox than of any other epidemic disease. In Macclesfield it has been necessary to remove the cases of small-pox to the workhouse infirmary, an arrangement which can never be considered as satisfactory. Dr. Bland's report was referred to the Sanitary Committee, and a hope expressed that the committee would soon make a definite proposal to the Town Council for taking immediate steps in the matter.

UNQUALIFIED ASSISTANTS AND UNCERTIFIED CAUSES OF DEATH.

THE Registrar-General, in his last Weekly Return, calls attention to the fact that during the three weeks ending the 6th instant, the causes of no less than 13 per cent. of the deaths registered in Peckham were uncertified either by registered medical practitioner or by coroner. The average proportion of uncertificated causes of death in London is less than two per cent. The Registrar-General remarks:—"This unsatisfactory condition of the death-register is mainly due to the employment of unqualified assistants by medical practitioners in that neighbourhood." A legal certificate of the cause of death of a patient who has been *exclusively* attended by an unqualified, or even an unregistered though qualified, assistant cannot be obtained unless an inquest be held. A medical practitioner who allows his unqualified assistant *exclusively* to attend any of his patients is encouraging a form of unqualified medical practice which is mischievous alike on public and professional grounds.

REMOVAL OF A BUTTON FROM THE BRONCHUS.

AN eminently successful and novel method was resorted to on great emergency for the removal of a button from the left bronchus of a lad, at the London Hospital, on the 12th inst. The patient, aged thirteen, had accidentally slipped the button into his trachea on April 23rd, where it had remained without producing very serious symptoms until May 11th, when it fell into the left bronchus, producing symptoms of collapse of the lower lobe of the lung. Mr. Maunder, having performed tracheotomy, first inverted and shook the patient, but with no success; he then placed the patient on his back and pressed through the wound into the left bronchus about seven inches of looped silver wire, and was successful in withdrawing the button, together with a quantity of muco-purulent matter. The patient's urgent symptoms rapidly disappeared, and he is at present doing well.

THE COLLEGE OF PHYSICIANS AND THE GENERAL MEDICAL COUNCIL.

AS perhaps might have been expected, Dr. Bennett, on his elevation to the chair of the College, has resigned his appointment as representative of the College in the General Medical Council. With much fitness the College has elected Dr. Pitman, the Registrar of the College, to fill the vacancy. Few Fellows are more respected, and none can have a more intimate acquaintance with the affairs and the interests of the College than Dr. Pitman. These facts will secure him a just influence in the Council. The withdrawal of Dr. Bennett will be much felt, as he was treasurer of the Council, and, in all respects, one of its influential members.

DR. BROWN-SEQUARD.

WE understand that this distinguished physiologist will shortly visit England for the purpose of delivering a series of lectures on the Physiological Pathology of the Brain. Dr. Brown-Séquard will enunciate entirely new views in connexion with a subject on which he is known to have worked assiduously. After their delivery, we shall present these lectures to the profession, through the columns of THE LANCET, revised by Dr. Brown-Séquard.

AT a large and influential meeting held at Brighton, it was resolved to erect some public memorial of the late Sir Cordy Burrows, and a committee, comprising the borough members and members for East Sussex, was appointed.

THE Sanitary Conference convened by the Social Science and British Medical Associations, met at the rooms of the Society of Arts on the 11th and 12th inst., under the presidency of Lord Aberdare. The questions submitted to the conference related to the division of the country for sanitary and other local government purposes; to the authorities for sanitary purposes and their relation to the central government; to the adequacy of the powers given to local authorities for sanitary purposes; to the incidence of taxation for sanitary purposes; the executive officers needful for good local administration; and the alterations, if any, required in the central executive organisation to augment the efficiency of local administration. With respect to the relation of the central authority to local authorities no conclusion appears to have been arrived at; but with respect to the other questions considered, no less than fifteen resolutions were adopted.

WHILST the Prince of Wales was at Lisbon on returning from his Eastern tour, his Royal Highness paid a visit to the flag-ship, the *Minotaur*, and a number of naval officers were on that occasion presented to the Prince. The naval medical officers, however, were conspicuous by their absence, and the circumstance not unnaturally gave rise to some surprise and comments. As we have good reason for knowing that the fact did not escape the attention of the Prince of Wales, and that his Royal Highness caused it to be subsequently intimated to the medical officers that it was not in accordance with his Royal Highness's desire, the blame may be fairly attributed to the Admiral and Naval authorities. The Admiralty may issue Warrants and Orders in Council for the improvement of their medical service, but it is this sort of thing which makes that service unpopular with medical men possessed of the self-respect found in gentlemen of every service.

THE twenty-fourth annual meeting of the governors of the Children's Hospital, Great Ormond-street, was held last week, the Right Hon. Viscount Gort in the chair. It appeared from the report presented that, during the past year, 874 in-patients were admitted into the hospital and convalescent home, whilst the number of out-patients treated amounted to 11,958. The cost of maintenance of the two establishments for the period was £7175 18*s*. It was stated that a sum of £2500 had been collected at the recent anniversary festival. Dr. West, consulting physician, has presented the institution with over five hundred medical books, chiefly on the diseases of children.

THE annual report of the sanitary condition of the Middlesex and Hertfordshire combined sanitary districts for the year 1875 has recently been issued by Dr. C. E. Saunders, medical officer of health. The combined districts comprise Barnet, Berkhamstead, Hemel Hempstead, Hendon, Watford, and Welwyn, the gross population of which may be put down as 95,000. The death-rate of the whole was 19 per thousand annually, and the birth-rate 30·3. Zymotic disease was more or less prevalent in the districts during the year, while there is striking evidence of overcrowding in many of the localities, and also of the want of efficient drainage and sewerage.

WE regret to observe, writes the *Army and Navy Gazette*, the voluntary retirement of Dr. Duigan as Deputy Inspector-General of Hospitals and Fleets in the prime of life and efficiency, without waiting to attain the higher positions of the service which would have been open to him, had he elected to remain, as a matter of course. "Dr. Duigan is probably more highly decorated for war services than any other contemporaneous officer."

AT the annual meeting of the governors and supporters of the Devon and Exeter Hospital, held last week, the chief topic of interest appears to have been how best to meet the growing increase of expenditure over income. This seems to be so serious a feature in the affairs of the hospital that one gentleman said that if matters continued to go on as they had done the institution would be pauperised in twenty-five years' time. The only suggestion thrown out by way of remedy appears to have been the advisability of limiting the number of recommendations for hospital relief. Ultimately the meeting was adjourned till the 6th of June, with the understanding that a committee should then be appointed to devise means to balance receipts and expenditure.

WE understand that at St. Thomas's Hospital, on Wednesday, Mr. MacCormac removed the whole of the scapula with part of the clavicle of a woman, for a myxo-chondromatous growth weighing six pounds. The operation occupied twenty-four minutes, and was attended with very slight hæmorrhage. The patient has since progressed uninterruptedly well. The wound has been daily treated antiseptically, and the whole surface dressed with salicysed cotton-wool under the personal supervision of Mr. MacCormac. There has been very little traumatic fever.

WE are glad to learn that two new scholarships have recently been bequeathed to the Medical School of Guy's Hospital by former students. The late Mr. Sands Cox left a sum of £500 invested so as to produce £15 a year, the interest upon which is to be competed for once in three years. The other bequest was made by Mr. Michael Harris, M.B., lately deceased, the form of which is a prize in Anatomy of the value of £10, to be bestowed annually.

AS we go to press, Mr. Errington will, in the House of Commons, ask the Secretary of State for War whether it is not the case that in some thirty-five militia regiments the post of surgeon or assistant-surgeon, or both, are vacant owing to the appointments having been suspended for more than a year "pending new regulations," and if he will state, for the convenience of candidates waiting for appointment, how soon the vacancies are likely to be filled up.

THE deaths in London last week amounted to 1457, giving an annual rate of mortality of 22 per thousand. The deaths included 1 from small-pox, 49 from measles, 31 from scarlet fever, 8 from diphtheria, 79 from whooping-cough, 25 from different forms of fever, 6 from diarrhœa, and 275 referred to diseases of the respiratory organs. Different kinds of violence caused 43 deaths. Latest returns from the other European capitals show that the continent is fairly healthy.

WE presume that Dr. Ward was led to put the question he did to the Minister for War as to the employment of foreign surgeons for officering the Army and Navy Medical Departments, which was answered by Mr. Gathorne Hardy to the effect that the Government had no such intention, from the fact that a hint of this kind had appeared in the columns of one of our military contemporaries.

DR. G. H. B. MACLEOD, Regius Professor of Surgery, Glasgow University, has been presented by the senior students of medicine with several handsome pieces of plate, in recognition of his services in conducting for their special instruction a class of Clinical Surgery during the past session.

WE regret to learn of the death of Dr. Andrew Wynter, at his residence, Chestnut Lodge, Grove Park, Chiswick.

WE are informed that a committee of the Sheffield Town Council has been deputed to visit hospitals for infectious diseases situated in different parts of the country, with a view to obtain information as to the best form of construction and management to be adopted with reference to the establishment of a similar institution in Sheffield, the want of which has recently been so severely felt.

SIR JOSEPH FAYRER, K.C.S.I., M.D., has been appointed an Honorary Physician to H.R.H. the Prince of Wales.

SURGEON-MAJOR H. J. BLANC has been appointed Professor of Surgery in the Grant Medical College, Calcutta.

"THE BALHAM MYSTERY."

WE have received the following important communications from Dr. George Johnson, Dr. J. F. Payne, and Dr. Redwood.

MEDICAL HISTORY OF THE CASE.

BY GEORGE JOHNSON, M.D., F.R.S.,
PROFESSOR OF CLINICAL MEDICINE AND SENIOR PHYSICIAN TO KING'S COLLEGE HOSPITAL.

At half-past one in the morning of Wednesday, April 19th, I was called by my colleague, Mr. Royes Bell, to go with him to Balham to see his cousin, Mr. Charles Delauney Turner Bravo, a barrister, aged thirty, who had been suddenly seized with an alarming illness. We reached the patient's house at 2.30 A.M., and there we met Dr. Moore and Mr. Harrison, who had been in attendance since about 10.30 on Tuesday night. These gentlemen informed us that Mr. Bravo was, with the exception of a slight neuralgia, in his usual good health when he sat down to dinner at about 7 o'clock. At about 9.30 he went up to his bedroom, and was soon heard to call out for warm water. A lady of the household, Mrs. Cox, found him vomiting out of the window, and apparently very ill. Dr. Moore and Mr. Harrison were sent for, and when they arrived, in quick succession, about an hour after the seizure, they found the patient partly undressed, completely unconscious, breathing heavily, with dilated pupils, cold skin, and nearly pulseless. Death appeared to be imminent. He was immediately placed on the bed, and, as he could not swallow, brandy was injected into the rectum, and a mustard poultice was placed over the heart; after a short time the heart's action began to improve, but the state of unconsciousness continued. Inquiries were made of those present, but no explanation of the alarming symptoms was obtained.

When Mr. Bell and I entered the patient's room he was still unconscious, lying on his back, breathing rather deeply; the pulse was about 100, rather feeble; the sounds and action of the heart were normal; and the pupils were then of natural size. The aspect of the patient was like that of one in the state of drowsiness following an epileptic fit. He had once vomited some blood-tinged fluid after being placed in bed, and a motion had been passed unconsciously in bed. Within about a quarter of an hour after our arrival there were signs of returning consciousness; he began to toss about uneasily, and he soon recognised Mr. Bell and replied to his questions. He now vomited some mucus deeply tinged with blood; then he made violent efforts to get out of bed, complained of severe pain in the abdomen, and called for the close-stool; with assistance he got on it, and then, with violent straining efforts, he passed from the bowel a considerable quantity of blood.

About this time, soon after three o'clock, Mr. Bell called me out of the room to hear Mrs. Cox repeat a statement which she had just made to him to the effect that when Mr. Bravo was first taken ill in his bedroom he said to her, "I have taken some of that poison, but don't tell Florence" (his wife). Mrs. Bravo had been ill, and was occupying a separate room. I of course inquired whether

he had mentioned the nature of the poison, or why or when he had taken it, to which negative answers were given. She could tell us nothing more than was contained in the above brief statement, and Dr. Moore and Mr. Harrison subsequently informed us that even this amount of information had not been communicated to them during their four hours' anxious attendance upon the apparently dying man. Mr. Bell and I then returned to the patient, who was perfectly conscious, and I told him what we had just heard from Mrs. Cox. He said he did not remember having spoken of poison, and the only poison he had taken was some laudanum, which he had rubbed on his gums, and some of which he might have swallowed. I asked him if there were any poisons in the house. He said "Yes, several." I asked him to name them, and he mentioned laudanum, chloroform, and a "rat-poison" which was kept in the stable. We found in the bedroom a bottle containing laudanum, but no remains of other poison nor any vessel out of which poison had apparently been taken. But it was quite evident that the symptoms were the result of some powerfully irritant poison; there was violent pain in the abdomen, excessive tenderness on pressure, severe tenesmus, frequent passing of blood by stool, and occasional vomiting of blood. The tongue, mouth, and throat presented no appearance of abrasion. It was suggested by one of the ladies that the symptoms might be caused by Mr. Bravo's horse having run away with him during his afternoon ride; but there had been no fall or physical injury, and it was clear that the symptoms could not be thus explained. We agreed to give cold milk as copiously as it could be taken, to foment the abdomen, and give half a grain of morphia in a suppository as often as it might be necessary to subdue the pain.

I left him at 5.30 A.M., and took with me some of the vomited matters, which I at once got tested for arsenic, with a negative result. Mr. Bell remained with the patient throughout.

At 3 P.M. the same day I saw him again with the three gentlemen above-mentioned. The vomiting and purging continued, the discharges from the bowels being always bloody; there was thirst, severe abdominal pain and tenderness, the pulse was rapid and feeble, and the skin was cold and clammy. The intellect was clear. I now took away about half a pint of a bloody discharge from the bowel, which was afterwards sent to Dr. Redwood.

On Thursday, the 20th, at 9 A.M., the condition remained much the same, but the vomiting and purging had been less frequent; the stools were still of a tarry character from admixture of blood, but for some hours past the vomited matters—milk, iced champagne, &c.—had been free from blood. The skin was sallow, and the voice feeble. There had been no complaint of cramps, a symptom which appears to be very common in cases of antimonial poisoning. In consequence of the frequent vomiting, nutritive enemata had been given, but they caused so much pain that they had to be discontinued.

At 2.30 P.M. my colleague Mr. Henry Smith saw the patient with us; there was no material change beyond increasing feebleness.

Again, at 6.30 in the evening, Sir William Gull met Mr. Bell and me in consultation. He agreed with us that the symptoms were the result of an irritant poison, and expressed his conviction that the poison was arsenic. The patient was again questioned, as a dying man, with regard to his having knowingly taken poison, and he repeated the statement which he had originally made to me, that the only poison had been laudanum, for the relief of neuralgia. Sir William Gull said, "You have taken poison, but it is something more than laudanum;" and I said, "If you die without telling us more than we know at present, some one may be accused or suspected of having poisoned you;" to which he replied, "I am aware of that, but I can tell you nothing more."

On that occasion I looked out of the bedroom window, and found that the food which the patient had vomited on the night of the 18th had lodged upon a lead-covered projecting window, about four feet below the bedroom window. I then directed a servant to take up the vomited matter with a spoon and place it in a clean jar. This was done under my own eyes. I then sealed the jar, took it with me, and sent it on the following day, by the hands of Mr. Bell, to Dr. Redwood. I also took away a few ounces of the patient's urine, which was of natural colour and free from albumen. This I afterwards sent to Dr. Redwood.

I did not see the patient again, but I heard from Mr. Bell that he gradually sank and died at 5.20 A.M. on Friday, the 21st of April, and that he retained consciousness to the last. He died in about fifty-six hours after the onset of the symptoms. The body was examined by Dr. Payne, in the presence of Dr. Moore, Mr. Noyes Bell, Mr. Harrison, and myself, and an analysis of various substances was made by Professor Redwood. With reference to the post-mortem appearances, I may remark that I was at first surprised to find that, after the frequent vomiting of blood, the mucous membrane of the stomach showed no signs of congestion after death. In connexion with this, it is to be observed that no blood appeared in the vomited matters after about the first four-and-twenty hours. I suppose that the symptoms may be explained in the following manner. The antimony acted first on the stomach and upper part of the intestines as a local irritant, and excited vomiting first of the contents of the stomach, and then of blood-tinged mucus; next a portion of the poison entered the circulation, and the unconsciousness was probably the result of anæmia of the brain, partly due to the enfeebled action of the heart, and partly perhaps to contraction of the muscular arterioles of the brain excited by the irritant action of the poisoned blood. Lastly, the poison was eliminated partly through the kidneys, as shown by its detection in the urine, but mainly through the mucous membrane of the large intestine, causing there the intense congestion and hæmorrhagic erosions which were found after death, and the severe abdominal pain and purging which continued during life.

POST-MORTEM EXAMINATION ON THE BODY OF MR. BRAVO.

(*Died April 21st, 1876, at 5.20 a.m.; Examination made April 22nd, at 9 a.m.*)

BY J. F. PAYNE, M.D., F.R.C.P.,

ASSISTANT-PHYSICIAN TO ST. THOMAS'S HOSPITAL, EX-MINER IN PATHOLOGY IN THE UNIVERSITY OF EDINBURGH.

Body of a young man, very well made and muscular, perfectly well nourished. Post-mortem lividity of chest, shoulders, part of face and hands, also of nearly the whole of lower aspect of body and limbs. Moderate rigor mortis. No notable decomposition. Frothy blood or blood-stained fluid issuing in considerable quantity from the mouth, and increased on pressure of the chest. No external wound, bruise, or other injury.—Pleuræ: Each contained from two to three ounces of blood-stained fluid. No adhesions or inflammation.—Lungs: Both in the same condition. Anterior parts of all the lobes pale and crepitant. Posterior half of upper lobe and greater part of lower lobe very dark red, nearly black, dense, but not quite airless, floating on water, loaded with dark viscid fluid blood, which dripped off on section. This appeared to be solely due to hypostasis of liquid blood, there being no evidence of inflammation, or even certain evidence of congestion, during life. Bronchial tubes, with mucous surface stained of a bright red colour, from post-mortem transudation, and containing blood-stained fluid, like that issuing from the mouth.—The trachea and larynx also contained blood-stained fluid of similar appearance. Epiglottis, upper part of pharynx, and fauces generally also stained in the same manner, and containing some similar fluid, resulting from transudation. Pericardium contained about half an ounce of blood-stained serum. Heart of moderate size; surface with a few ecchymotic spots; right ventricle distended with blood, chiefly liquid and gas, also containing a small soft clot, white on the upper surface, black beneath; right auricle and great veins containing dark frothy blood, mostly liquid; left ventricle nearly empty; walls relaxed; valves normal; muscular substance of heart soft and pale; aorta with spots of commencing atheroma. The blood generally was very dark, staining the vessels deeply, and more fluid than normal, with only small soft coagula.—Abdominal organs: No fluid, adhesions, or sign of inflammation in peritoneum. Stomach contained gas and liquid; its walls were of normal thickness; the mucous membrane soft, pale, yellowish, except at the lower part, where the liquid contents were lodged, and where the surface had a diffuse red staining (from transudation). In the upper part, which was distended with gas, there were numerous small bubbles under the mucous membrane, apparently the result of post-mortem

emphysema; there was no appearance of congestion, inflammation, or corrosion. The liquid contents consisted of about eight ounces of thick, gruel-like matter, of a yellowish colour, containing some small solid lumps, and having the odour of alcoholic fermentation. The œsophagus was normal, and contained some of the same matter as the stomach.—Intestines: Duodenum very soft and easily torn, being ruptured in tying it, but careful examination detected no perforation or ulceration; mucous surface pale and yellowish; jejunum had similar appearance.—Ileum: Some of the coils externally very dark, others pale, containing both liquid and gas, which distended the upper coils. The last portion, about two feet, near the ileo-cæcal valve, was pale, small, and collapsed. Mucous membrane through the whole extent pale and yellowish, with no congestion, except at the lower end, where was a little punctiform redness. Peyer's patches of normal size, and apparently quite natural, as were also the solitary glands. The contents of this portion of intestine consisted of yellow pasty matter, of very offensive odour, without any admixture of blood. Ileo-cæcal valve and vermiform appendix natural.—Large intestine: Cæcum immediately below the valve of a deep-red colour, and containing red blood-clots. On examination, the mucous membrane found deeply congested, and exhibiting several small ulcers, or ulcerated pustules, on the surface of most of which was a small quantity of pus, and from several of which small blood-clots were depending. They were mostly the size of shot, the largest the size of half a pea, irregular in shape, and might have originated in the solitary glands. Epithelium in surrounding parts thin, and partly removed, so that the muscular coat was more obvious than natural; but there was no perforation. Remainder of colon very deeply blood-stained, of a dark-red colour, but with no ulceration. The contents were soft, pasty, chocolate-coloured matter, very adherent to the walls, composed of fæcal matter mixed with blood-clot and altered blood.—Rectum for about eight inches from anus was empty, the mucous surface slate-coloured and the walls soft. This condition commenced abruptly, and may have been produced by injections. Liver, moderate size; surface smooth; capsule with one linear fibrous cicatrix an inch and a half long; substance firm, of a pale brownish liver-colour; lobular structure distinct, and general appearance normal. Bile-ducts contained bile of natural appearance. Spleen moderate size, of a dark-red colour, and normal in appearance. Pancreas natural. Supra-renal capsules natural. Kidneys moderate size; capsules easily detached, except in one spot; surface smooth, pale. Left kidney contained one solitary cyst, the size of a cherry, containing clear fluid; otherwise quite normal in appearance. Bladder natural, containing clear urine.—Head (opened after the body): Skull quite natural; dura mater fairly full of blood, not congested; sinuses containing some blood, chiefly fluid; pia mater and arachnoid also normal, with no excess of blood; brain-substance natural, with no excess of blood or of fluid. Mouth and lips natural, except that papillæ at back of tongue were larger than usual, and one contained some puriform matter.

Remarks.—The morbid appearances described above do not precisely coincide with those of many published accounts of the appearances after death from antimony; but it must be said that these (as given in Taylor "On Poisons," &c.) are far from uniform. The most noticeable fact was the limitation of distinct morbid change, as far as the alimentary tract was concerned, to the large intestine, and here chiefly to the cæcum. There were none of the appearances in the stomach, gullet, or small intestine usually looked for as the result of "irritant poison." I desire also to call attention to the extent and conspicuous character of the appearances due to post-mortem transudation of the abnormally fluid or imperfectly coagulated blood. To this was due undoubtedly the presence of blood-stained fluid in the air passages, pleura, and pericardium, and the pseudo-congestion of the lungs. It is, indeed, not improbable that the settling down of blood in the posterior (i.e., lower, when the body was recumbent) portions may have commenced before death, when the heart's action was failing; but the greater part must have occurred after death. This explanation, so obvious to pathologists, would not be worth dwelling upon, but that I find "congestion of the lungs," and "redness of the posterior portions of the lungs," set down in some of the accounts of antimony poisoning (especially the older ones) which must clearly have been due to this cause. An analogous explanation applies to the redness of the surface of part of the stomach, caused by the action of the contents of the stomach on blood contained in the vessels, and this may perhaps account for some of the "congestions" often described in the mucous membrane of the stomach. I have found no account of a case in which the lesions of the large intestine were precisely what they were here, or in which the hæmorrhage was so distinctly traceable to ulceration, as, at least in the later stages of the illness, it was here.

The contents of the stomach and intestines were at once taken to Professor Redwood for analysis, a portion of the material from the large intestine, which differed in appearance from that in the stomach and small intestine, being kept separate. Portions of the digestive organs and other viscera were also preserved, but the result of the analysis of the contents made it unnecessary to examine them.

REPORT OF ANALYSIS OF SUBSTANCES RELATING TO THE DEATH OF MR. BRAVO.

BY J. REDWOOD,
PROFESSOR OF CHEMISTRY AND PHARMACY TO THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

On Friday, the 21st of April, I received from Mr. Bell, of 44, Harley-street, a jar containing about ten ounces of semi-solid matter, which had been vomited by Mr. Bravo, of the Priory, Bedford-hill, Streatham, and a bottle containing eight ounces of liquid evacuations of the same patient.

On Saturday, the 22nd of April, I received from Dr. J. P. Payne, of 6, Savile-row, a jar containing about a pint of a dark-coloured liquid from the stomach and small intestines, and a small bottle containing about an ounce and a half of a thickish dark-coloured liquid from the large intestine, which had been taken from the body of Mr. Bravo at the post-mortem examination.

On Monday, the 24th of April, I received from Dr. Johnson, of Savile-row, a bottle containing about five ounces of urine which had been passed by Mr. Bravo; and on the same day I also received from Mr. Bell, of Harley-street, a small packet of a salt, labelled "One half to be taken dissolved in water," and a phial labelled "Laudanum," with about half a drachm of liquid, apparently laudanum, in it.

These several substances were given me for the purpose of having them analysed, and especially with the view of ascertaining whether they contained any poisonous substance the presence of which might account for the symptoms of the sudden and severe attack of illness from which Mr. Bravo had suffered, and which terminated in his death.

I have submitted the before-named substances to careful examination and analysis, and have obtained satisfactory evidence of the presence of antimony in the vomited food, in the evacuations, and some of the matter taken from the stomach and intestinal canal at the post-mortem examination of the body.

The quantity of antimony found was greatest in the vomited food. Next to this it was found in greatest quantity in the dark-coloured liquid evacuations. It was also found, but in smaller quantities, in the urine and in the matter taken from the large intestine. Only slight traces of it were found in the matter taken from the stomach and small intestines.

Before discovering the antimony I had made a search for other metallic poisons, and especially for arsenic and mercury, but I failed to discover either of these substances. I found a little lead in the vomited food, but the presence of this was afterwards accounted for by the fact that the patient had discharged his stomach outside his bedroom window on to the leads, where it remained for some time before it was collected and brought to me.

When I received this vomited matter it presented the following characters:—It consisted of solid, masticated, but undigested food, and principally animal food. It was slightly acid to test-paper, and had a sour, but not very sour or disagreeable smell. It had evidently been ejected from the stomach shortly after a meal, and before digestion had taken place. I examined it carefully with a magnifying glass to ascertain whether there were any solid inorganic particles present that might tend to throw light upon the subject, but I discovered none.

The investigation adopted for the detection of arsenic or mercury led to a suspicion that antimony was present, and the method I pursued for eliminating and proving the presence of antimony was the following:—

The solid vomited matter was heated in a platinum dish, with pure concentrated sulphuric acid, until it became liquid; nitrate of sodium was then added, and the heat continued until the organic matter was completely carbonised and dried; it was then boiled with a solution of tartaric acid, and the solution filtered. Through the clear colourless solution thus produced, sulphuretted hydrogen was passed, which gave a red precipitate, characteristic of antimony. This was collected, washed, dried, and weighed. Some of the dry precipitate was heated in contact with hydrochloric acid, in which it dissolved, while sulphuretted hydrogen escaped. The solution thus formed added to water gave a white precipitate, characteristic of antimony. Some of the solution was put into a small Marsh's apparatus, in which pure hydrogen was being evolved, and the flame of the ignited gas, when brought against the surface of cold porcelain, gave a black stain caused by the deposition of metallic antimony. That this was antimony and not arsenic was proved by the application of the usual tests.

The liquid evacuations and the liquid matter taken from the stomach and intestines were tested in a similar way to the foregoing, only that the organic matter was in these cases destroyed by means of hydrochloric and nitric acids.

It is probable that the antimony thus found was taken in the form of emetic tartar, of which a large quantity must have been administered. I have calculated that the antimony found in the vomited food submitted to me would be equivalent to ten grains of emetic tartar; but this would probably have been only a small portion of what was taken, for after lying on the leads for two days, exposed to rain part of the time, some of that held in solution must have been washed away. Some would also probably have been thrown away with evacuations that were not preserved. It may therefore be assumed that a very large dose of the antimonial salt was taken, which would probably account for all the symptoms observed in the case.

I examined the salt and the laudanum left with me by Mr. Bell, but found no antimony in either. The salt consisted of sulphate of magnesia.

UNIVERSITY OF LONDON.

THE following circular, supported by many influential graduates, has been addressed to the members of Convocation. There can be no question that Dr. Barnes is eminently qualified to serve both his University and the profession on the Senate:—

"SIR,—It is the turn for a medical graduate to be selected for a vacancy in the Senate. Permit us to lay before you the claims of Robert Barnes, M.D., to be one of the three persons for nomination by his brother-graduates. In the medical profession it is widely felt that the obstetric branch should be represented. This was originally the case in the University; but since the death of Sir Charles Locock there has been no representative of this branch. The general claims of Dr. Barnes will be readily acknowledged. As a teacher, author, hospital physician and practitioner he has achieved a leading position. His special claim to the confidence of Convocation is based upon the earnest and useful work he has done for the University. He was one of the first and most devoted amongst those who initiated and carried to a successful issue the ten years' struggle for the charter to which the development of the University is so greatly due. He has further served the University on many occasions by his pen in the public press; and he has filled the office of examiner for five years.

"We have the honour to be, Sir, your obedient servants,

"J. LANGDON DOWN, M.D.

"16th May, 1876." "ARTHUR W. EDIS, M.D.

UNIVERSITY OF ABERDEEN.—The John Murray Medal and Scholarship has been awarded to James Simpson, M.B., C.M., Aberdeen, as the most distinguished medical graduate of his year.

Correspondence.

"Audi alteram partem."

DENTAL ANÆSTHETICS AND HEART DISEASE.

To the Editor of THE LANCET.

SIR,—I believe that my colleague, Mr. Hamilton Cartwright, has correctly explained the *modus operandi* of nitrous oxide gas and the nature of the risk incurred by a patient who has a fat and flabby heart. With your permission I will add a few words to Mr. Cartwright's account of the phenomena attending the inhalation of the gas.

In most cases, during the first few seconds the pulse and the breathing are quickened, as a result, probably, of emotional excitement. In the next stage the breathing becomes slow and shallow, and the pulse full and firm. Then, after a period which varies in different cases from forty to eighty or ninety seconds, the pulse suddenly becomes almost, or even quite, imperceptible, the features become livid, the pupils are widely dilated, there is a state of general muscular rigidity; in short, all the phenomena of the first stage of an epileptic fit are present. The mouthpiece being removed, the morbid phenomena quickly pass away, the features regain their normal colour, the pulse returns, and for a few seconds has again a full and throbbing character.

The explanation of the phenomena appears to be sufficiently obvious. The nitrous oxide rapidly replaces the oxygen in the lungs and in the blood, black unoxygenised blood passes into the systemic arteries and excites, through the vaso-motor nerves and centre, contraction of the muscular arterioles. The resistance thus offered to the passage of unaerated blood through the terminal arteries explains the temporary fulness and tension of the radial pulse. The unoxygenised blood, passing through the systemi ccapillaries without the usual interchange of materials between it and the tissues, returns to the lungs in an abnormal condition, and there excites contraction of the pulmonary muscular arterioles. The resistance thus offered to the passage of blood through the lungs explains, on the one side, the systemic arterial emptiness with feebleness or even complete disappearance of the pulse, and, on the other, the systemic venous fulness with lividity of the skin. The epileptiform condition is explained by the sudden and extreme diminution of the blood-supply to the brain, the blood at the same time being unaerated.

In an animal killed by the continued inhalation of the gas, as I have recently ascertained by experiments on rabbits, performed in conjunction with Mr. Cartwright, the right cavities of the heart and the systemic veins are distended by black blood, while the left cavities and the systemic arteries are comparatively empty and flaccid, the blood on both sides of the heart being equally black. Now it is evident that if the muscular walls of the right cavities of the heart are thin and flabby or in a state of fatty degeneration, the distension to which they are subjected in the advanced stage of nitrous oxide inhalation may result in a suddenly fatal suspension of their contractile power, or, short of that, in a weakening of their muscular fibres (analogous to the paralysis which results from over-distension of the urinary bladder), which may manifest itself in a feebleness and irregularity of the circulation, continuing for an indefinite period, and attended with many distressing symptoms.

Mr. Braine, in his letter to you, says of nitrous oxide and ether, that they "add to the force of the heart's action, and stimulate it." With regard to nitrous oxide, I believe this to be an error. The temporary fulness and firmness of the pulse may have suggested this erroneous theory; but I have before given what is unquestionably the true explanation of that phenomenon. No one who has studied the phenomena of nitrous oxide anæsthesia can think without a shudder of the reckless administration of the gas by men ignorant of the physiology of the circulation, and wanting the medical knowledge and experience required to detect the physical conditions which in a given case would render the use of this agent more than usually hazardous.

It cannot be too constantly borne in mind by those who administer nitrous oxide gas that the two main sources of

risk are—first, an impeded circulation through the lungs, such as may result from advanced vesicular emphysema; and secondly, weakness of the walls of the *right* cavities of the heart.—I am, Sir, your obedient servant,

Savile-row, May 11th. GEORGE JOHNSON.

MILK STANDARDS.

To the Editor of THE LANCET.

SIR,—In your last week's issue you call attention to a most important case of alleged milk adulteration which you state has just occurred at Birmingham; the case, however, really belonged to Coventry.

The results of the analysis as given by myself are: solids not fat, 8·67; fat, 2·47. As given by the Somerset House chemists: solids not fat, 8·21; fat, 2·83.

You justly say that my figures are pretty nearly in accordance with those of the Somerset House analysts. "A different interpretation, however, was put upon them;" and "the results did not, in the experience of the analysts, justify the conclusion that cream had been abstracted from, or water added to, the milk. . . . It can, we think, hardly be doubted that the Government authorities were right."

Permit me to say that my experience, extending over a period of sixteen years, leads me to a different conclusion, and to give you the grounds on which my view is based. In the first place, the amount of fat found by the Somerset House analysts is higher than that found by any of the analysts who examined the same milk except Dr. Völcker, and although higher than I make it, yet it is lower than in the average yield of any dairy I have ever examined, and further, it is very much lower than that contained in any of the samples of genuine milk bought in the same town by the inspector on the same day as the sample in question. I fail, therefore, to see why there should be such a large difference in the milks of cows fed on farms in the same county and locality, unless, as I firmly believe, the milk had been tampered with. Dealers have grown so scientific in their malpractices that it is somewhat difficult to know exactly how they have manipulated their wares, when, nevertheless, it is quite certain that such manipulation has occurred. Nearly all milkmen systematically use the "lactometer" and the "creamometer," as they term it. It may not perhaps be known to you that one plan is to skim a portion of the evening's milk and to mix it with the next morning's whole milk; another, to simply add water to rich milk subject to the indications of the "lactometer," and with due regard to the low standards which are in so much favour among some chemists—or, in order to make swearing a conscientious act, to reverse the process, and add the milk to the water; another, to milk the cows only partially, leaving the latter portion of milk, richer in cream, and technically called "striplings," to be drawn afterwards, and retained at the farm for the purpose of making butter from it, while the first poorer portion of the genuine milk is sent into the towns for the benefit of the public. Owing to these and other devices it is difficult for the analyst to be prepared with the absolutely correct explanation of the precise kind of sophistication practised, although he may be morally certain that the milk has been impoverished in some way.

You say, "the standard for solids, not fat, is fixed by the same body (i. e., the Society of Public Analysts) at nine per cent., and it might therefore have been argued that the sample in question was adulterated with water. But this was not charged, and it is considered by many, the Somerset House chemists among the number, that the standard is too high." I think it highly probable that this sample had been both watered and partially skimmed, but I reported abstraction of cream in this case, because, on comparing this sample with those bought in Coventry at the same time, I found a greater difference between the quantities of fat than between the quantities of solids not fat.

If my standard, or that of the Society of Public Analysts, be too high, why should not the Somerset House chemists let us know theirs? I have no hesitation in giving mine, and have deduced it from the results which I have obtained from the analysis of milks known to be genuine, which are given in the table below, and according to which the minimum (not the standard) recommended by the Society of Public Analysts, is for the milk of properly-fed cows much too low. The following represents the composition of four genuine milks sold in the streets of Coventry at the same time as the other sample, and all purchased by Mr. Webster, the inspector:—

	Solids not Fat.	Fat.	Total Solids.	Ash.
(*a*)	9·56	3·60	13·16	·66
(*b*)	9·92	3·58	13·50	·69
(*c*)	10·15	2·88	13·03	·66
(*d*)	9·20	3·26	12·46	·68

The following figures also represent the composition of four samples bought by the inspector at Alcester:—

	Solids not Fat.	Fat.	Total Solids.	Ash.
(*e*)	9·30	3·61	12·91	·74
(*f*)	10·09	3·52	13·61	·79
(*g*)	10·77	2·94	13·71	·79
(*h*)	9·97	3·45	13·42	·72

The sample in question yielded very different results—viz.:

Solids not Fat.	Fat.	Total Solids.	Ash.
8·67	2·47	11·14	·72

And I shall require better proofs of the likelihood of such a milk being genuine than any I have yet had before I alter my opinion respecting it. I don't deny that in the case of half-starved or sick cows a lower quality may be obtained; but these cases are rare and exceptional. They do not affect the average quality of a dairy, and ought not in any case to be set up as a standard of comparison for good milk, even if it be conceded that it is right to sell such milk; for supposing a single cow to give a poor milk, another single cow in the same herd will be found to give one proportionately richer, and so, as proved by actual experience, the average comes out as would be expected. It is altogether a mistake to suppose that all the cows of a herd give poor milk or that milk is sold from one cow; such an assumption suits the milkmen and their advocates, but it is opposed to the truth and its practical application is very injurious to the public interest. It is quite certain that if such milk were supplied by the farmer to the town milk-dealer the latter would complain of its being adulterated, and put in a claim for compensation. I have known this to be the case in many instances, and damages have been obtained in the County Court not only for the deteriorated quality of the milk, but also for the consequent injury to the milkman's business, and this where the milk was superior to the sample in question. No one but a special pleader could pronounce such a milk genuine, and this was the unanimous opinion of the members present at the meeting of the Society of Public Analysts held on the 3rd inst., before whom I read a paper on "Milk Standards." The most unqualified surprise was expressed at the opinion of the Government analysts that "the results did not in the experience of the analysts justify the conclusion that either cream had been abstracted from or water added to the milk." It was felt and stated generally that if such views are to obtain at Somerset House it is quite useless to analyse milk any more. In nearly every case the public analyst, however conscientious and experienced, is sure to be defeated by the very court of reference to whom they at one time looked for assistance and support in the performance of their onerous duties; but it appears from the general course of things that everything is to give way to traders' interests and "trade usages," as a consequence of which the trader becomes every day more aggressive and insolent, talking glibly on every occasion of public analysts as incompetent, ignorant, and trade persecutors, with other choice epithets and false statements and insinuations.

The question of adulteration is one, however, not only affecting the pocket of the consumer; what is worse, it may, and very often does, affect his health. The water used for adulterating milk is often charged with the germs of disease, as has recently been proved in many instances. The ill wrought in this direction by such views as I am combating will probably increase instead of diminish. This fact may appear the more forcible in all its bearings when it is learnt that in order to reduce the best sample of milk bought in Coventry to the level of the sample submitted to Somerset House, it would be necessary to add to 100 parts of it upwards of 23 per cent. of water; and to effect the same reduction in the best sample purchased by the inspector at Alcester, 100 parts would require the addition of 31 parts of water. These facts show what an opening is

presented for fraud and injury to health by taking as milk-standards the yield of unhealthy or half-starved cows.

In order to acquiesce in the adoption of such a standard, in view of the results of my numerous analyses of milk known to be genuine, it would be necessary to ignore those results, and sacrifice my conscientious convictions.

I remain, Sir, yours faithfully,

ALFRED HILL, M.D.,

Medical Officer of Health and Analyst to the Borough of Birmingham, and formerly to the City of Coventry and County of Warwick.

Birmingham, May 10th, 1876.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Fellows on May 15th, 1876:—

Anthony, John, M.D., Birmingham.
Barry, John O'Brien Milner, M.D., Tunbridge Wells.
Bateman, Frederic, M.D., Norwich.
Brodie, George Bernard, M.D., Curzon-street.
Brunton, Thomas Lauder, M.D., Somerset-street.
Cavafy, John, M.D., Upper Berkeley-street.
Hollis, William Ainslie, M.D., Brighton.
Paine, William Henry, M.D., Stroud.
Woodman, William Bathurst, M.D., Christopher-street.
Yeo, Isaac Burney, M.D., Hertford-street.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the last meeting of the Council, Mr. Samuel J. A. Salter, M.B., F.R.S., was re-elected a member of the Board of Examiners in Dental Surgery. The following gentlemen having passed the required examination for the diploma, were duly admitted Members of the College at meetings of the Court of Examiners on Tuesday and Wednesday last:—

Anderson, Charles M., Donegal.
Batchelor, Henry T., L.R.C.P., Bancroft-road.
Berridge, William A., Upholland.
Brunell, Arthur, Morpeth.
Chadwick, Walter S., Wakefield.
Clubbe, Charles P. B., Hull.
Coates, Harcourt, Salisbury.
Coley, Frederick C., Blackheath.
Cook, Joseph B., Nottingham-place.
Cooper, Peter, Farningham, Kent.
Denton, Arthur H., Sheffield.
Dinnen, William T., L.K.Q.C.P.I., Holyhead.
Drewitt, Frederick G. D., B.A. Oxon., Arundel, Sussex.
Emmerson, John B., Newcastle-on-Tyne.
Essex, James R., Pontypool, Monmouthshire.
Feltham, William P., L.S.A., Portsea, Hants.
Harrhy, William R., Tredegar.
Henwood, John D., L.S.A., Millbrook, Cornwall.
Hewett, Augustus, L.S.A., Twickenham.
Johnstone, Charles R., L.S.A., Hayey.
Jones, John D., L.R.C.P., Great Torrington.
Lee, Charles G., Chester.
Lush, John S., L.S.A., West Lavington.
Makund, Manikji D., Bombay.
Moore, Charles A., L.S.A., Thetford, Norfolk.
Morgan, William, L.S.A., Swansea.
Page, William H., Cheltenham.
Patron, Alfred, M.D. Toronto, Clapham.
Pearce, Arthur, L.S.A., Kingsbridge, Devon.
Porter, Thomas L., L.S.A., Exeter.
Robinson, George W., Faversham, Kent.
Rodwell, Edward M., L.S.A., Loddon, Norfolk.
Roughton, James W., Kettering.
Seymour, Charles, M.B. and M.C. Aberdeen, Odiham, Hants.
Stamp, William D., Honiton, Devon.
Stark, Mark D., M.B. Toronto, Toronto, Canada.
Thomas, John H., L.R.C.P.Ed., St. Ives, Cornwall.
Tyrrell, Walter, Exeter.
Upton, Alfred, L.S.A., Petworth, Sussex.
Walker, David F., Emsworth, Hants.
Welchman, Henry P., Lichfield.
Willey, John M., Leicester.
Young, Percy G., St. Stephen's-square.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on May 11th:—

Bailey, Henry Frederick, William-street.
Ferrier, John Christian, Kingston, Ireland.
Hewett, Augustus, Cambridge-park, Twickenham.
Morris, John Henry, Salford.
Pearce, Arthur, Kingsbridge, Devon.
Ryder, Henry John, Kennington-park-road.
Seymour, Charles, Odiham, Hants.
Shoolbred, William Andrew, Wolverhampton.
Smyth, Albert Charles Butler, Ospringe-road, Kentish-town.

The following gentlemen passed the Primary Professional Examination on the same day:—

Brown, John, Charing-cross Hospital.
Mansell, Edward Bosser, Guy's Hospital.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—The biennial dinner will be held at Willis's Rooms on Saturday, June 10th, under the presidency of Lord Selborne. Tickets for ladies and gentlemen may be obtained from Mr. Ernest Morgan, at 12, Pall-Mall, price 25s. each.

EXAMINATIONS IN PREVENTIVE MEDICINE AND PUBLIC HEALTH, OXFORD.—The Board of Studies for Preventive Medicine and Public Health gives notice that it is proposed to hold an examination on the above subjects in the ensuing Michaelmas Term. The examination is open to all persons who have taken the degree of Bachelor of Medicine in the University of Oxford. Candidates are requested to send in their names to the Regius Professor of Medicine on or before October 1st.

Medical Appointments.

ATKINSON, G. F., has been appointed a House-Physician to the Glasgow Royal Infirmary.

BALLARD, W. W., M.D., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the County Hospital, Huntingdon.

BERNARD, F. R., M.B., C.M., has been appointed (on probation) Resident Medical Superintendent of the Metropolitan Asylum District Small-pox Asylum, Stockwell, vice McCann, resigned.

BRIGGS, W. P., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

CANE, H., M.R.C.S.E., has been appointed Clinical Assistant at the Hospital for Women, Soho-square.

CASE, H., M.R.C.S.E., L.S.A.L., has been appointed (on probation) Resident Medical Superintendent of the Metropolitan Asylum District Asylum for Imbeciles, Haverstock-hill, vice Millson, appointed Medical Superintendent of the Northamptonshire new Lunatic Asylum.

CURRAN, J. W., F.R.C.S.Ed., L.R.C.S.I., L.K.Q.C.P.I., has been reappointed Medical Officer and Public Vaccinator for No. 2 District of the Mansfield Union.

DAWE, T., M.R.C.S.E., L.S.A.L., has been appointed a Surgeon to the St. John's-wood and Portland-town Provident Dispensary, vice Millson, resigned.

DICKSON, E., L.R.C.S.Ed., has been appointed a Medical Officer and Public Vaccinator for the Parish of Barry, Forfarshire, vice Murray, deceased.

DRURY, S., M.D., L.R.C.S.Ed., L.S.A.L., has been appointed Lecturer on State Medicine at the Sheffield School of Medicine.

DUNN, W. G., has been appointed a House-Physician to the Glasgow Royal Infirmary.

ELLIOTT, W. H., M.D., L.R.C.S.I. & L.M., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births, &c., for the Glendermott Dispensary District of the Londonderry Union, vice Cuthbert, deceased.

GRAHAME, A., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

HEMMING, J. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the D District of the Thrapston Union, vice Norton, resigned.

HESELGRAVE, J., M.R.C.S.E., L.S.A.L., has been reappointed, till the 29th Sept., Medical Officer of Health for the Golcar, Linthwaite, Longwood, Marsden-in-Almondbury, Marsden-in-Huddersfield, Scammonden, and Slaithwaite Urban Sanitary Districts.

KEITH, A. E., M.B., C.M., has been appointed Medical Officer of Health for the Guisborough Rural Sanitary District, vice Keith, Anderson, and Chalmers, whose appointments have expired, at £60 for one year.

MCKENNA, W., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer to the Carrickmacross Union Workhouse, vice Tagert, resigned.

MACPHERSON, E. B., has been appointed a House-Physician to the Glasgow Royal Infirmary.

MOYES, J., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

ORR, A. B. S., has been appointed a House-Physician to the Glasgow Royal Infirmary.

PATON, D., M.D., L.R.C.S.Ed., has been appointed a Medical Officer and Public Vaccinator for the Parish of Barry, Forfarshire, vice Murray, deceased.

PINKERTON, R., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

REID, T., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Lochmaben, Dumfriesshire, vice Jefferies, resigned.

ROSE, W., has been appointed Assistant-Surgeon to King's College Hospital.

SCARLIFF, J. M. E., M.B., M.R.C.S., has been appointed Certifying Surgeon under the Factories Act for the Brighton District, vice Philbrick, resigned.

STIRLING, E. C., M.D., F.R.C.S.E., has been appointed a Surgeon to the Belgrave Hospital for Children, Cumberland-street, vice Brodhurst, resigned.

THOMSON, S., M.D., has been appointed Medical Officer to the Clydesdale Iron Company, Holytown, Lanarkshire, vice Muir, resigned.

TINDALL, D., has been appointed a House-Surgeon to the Glasgow Royal Infirmary.

TOWNSEND, C. P. G., L.R.C.S.Ed., L.S.A.L., has been appointed Assistant Medical Officer to the Hospital for the Insane, Barnwood, near Gloucester, vice Watson.

TURNER, F. J., L.R.C.P.E., has been appointed a House-Physician to the Glasgow Royal Infirmary.

WATSON, W. S., F.R.C.S., M.B., has been appointed Medical Officer to the Westminster and General Life Assurance Association, vice Campbell De Morgan, deceased.

WILLIAMS, H., M.R.C.S.E., has been appointed Medical Officer for the West District of the Bingham Union, for one year, vice Taylor, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BAILEY.—On the 8th inst., at King's-road, Brunswick-park, the wife of W. A. Bailey, M.D., of a daughter.

HANNAN.—On the 12th inst., at Downton, Wilts, the wife of Francis J. Hannan, M.D., of a son, who survived his birth three hours.

HOAR.—On the 6th inst., at Maidstone, the wife of Charles E. Hoar, M.D., of a daughter.

MAYOR.—On the 4th inst., at Monmouth, the wife of George Mayor, M.D., of a son.

SOMMERVILLE.—On the 12th ult., at Brawr, Rajpootana, India, the wife of James Sommerville, L.R.C.P.Ed., L.F.P.S.Ed., Medical Missionary, &c., of a son.

MARRIAGES.

EDDOWES—DAWSON.—On the 15th ult., at St. John's, Calcutta, Surgeon-Major W. Eddowes, Bengal Medical Service, to Grace Agnes Annette, daughter of the late Captain W. Dawson, R.N.

GREENHOW—JONES.—On the 18th inst., at the Parish Church, Bradford-on-Avon, by the Rev. S. Flood Jones, M.A., Precentor of Westminster, uncle of the bride, assisted by the Rev. John Rich, M.A., Vicar of Chippenham, the Rev. Edward Greenhow, M.A., Inspector of Schools in the Diocese of Llandaff, only son of E. Headlam Greenhow, M.D., F.R.S., to Isabel Mary Rich, eldest daughter of the Rev. Canon Jones, M.A., F.S.A. Vicar of Bradford-on-Avon.

DEATHS.

COLEMAN.—On the 7th inst., at Surbiton, Kingston-on-Thames, Matthew Trollope Colman, M.R.C.S.E., L.A.C., aged 64.

COOPER.—On the 12th inst., at Mansfield, Notts, Nathan Cooper, Esq., M.R.C.S.E., L.A.C., &c., aged 72. Friends will please accept this intimation.

JOY.—On the 9th inst., at Seymour-street, Hyde-park, John Joy, M.R.C.S.E., aged 65.

KETTY.—On the 4th inst., at Windsor, F. G. Ketty, L.R.C.S.I., Surgeon-Major 2nd Life Guards, aged 49.

LEIGH.—On the 8th inst., at Brighton, Henry Thomas Leigh, F.R.C.S.E., of Chiswick, aged 69.

LYONS.—On the 14th ult., at Midnapore, Lower Bengal, of puerperal fever, Eliza Grace, wife of Surgeon-Major R. T. Lyons, of the Bengal Army, daughter of Sir John Rose Cormick, M.D., of Paris.

MOORE.—On the 29th ult., at Cuddesham, Suffolk, Lionel Welham Moore, M.R.C.S.E., aged 56.

STEWART.—On the 4th ult., at Malhoopoorna, East India, A. A. Stewart, M.D., Surgeon-Major, Army, aged 47.

THATCHER.—On the 5th inst., at Albany-street, Edinburgh, Lewis Hay Thatcher, M.D.

THOMAS.—On the 30th ult., at Cheltenham, Reynold Clarke Thomas, M.D., aged 62.

[N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.]

Notes, Short Comments, and Answers to Correspondents.

A KNIFE-BLADE LYING FOR YEARS IN THE PLEURAL CAVITY.

DR. BENEKE mentions in the *Memorabilia*, first part of 1876, that a prisoner in the gaol of Lubeck died after a few months' illness, without presenting any striking pectoral symptoms, save hæmoptysis and fetid smell from the bronchi. The disease occurred after four years' imprisonment, and seven years after a wound in which the prisoner had been stabbed in the back. On a post-mortem examination, tubercular cavities were found in the lungs; and while the gentleman busy with the autopsy was endeavouring to loosen the adhesions of the left lung, he exclaimed that he had cut himself, and found his finger bleeding. On carefully examining the pleural cavity, a knife-blade was discovered, three inches long and half an inch wide. It was jammed between the third and fourth rib, just by the inner border of the scapula, the edge lying towards the lung. The blade was very rusty, and surrounded by a cyst formed by the thickened pleura. As stated above, it must have lain in the chest at least seven years, and the patient never mentioned anything connected with the stab.

Visitor, (Portsmouth.)—We believe that an English "Guide to Pontresina and its Neighbourhood" has been or is about to be issued for the benefit of visitors to the Upper Engadine. Dr. J. M. Ludwig, the resident physician there, is the author, who has had the aid of efficient collaborateurs in the production of his book.

Dr. Grimshaw, (Gravesend.)—The letter shall be inserted.

TRICHINÆ FROM SCHWEINFURTH.

To the Editor of THE LANCET.

SIR,—The woman, M—— J——, who was detected taking things from Mr. Philp's surgery, &c., doubtless, the same person against whom several of your readers have cautioned medical men in your journal. She is now in this gaol, and anyone can call and see her as to her identity. She is remanded until Friday, when she will most likely be put back for trial.

Yours truly,

THOS. H. WATERWORTH, M.D.

Surrey County Gaol, Newington, S.E., May 17th, 1876.

ALLEGED SPECIFIC AGAINST HYDROPHOBIA.

YET another addition to the long list of supposed specifics against hydrophobia! It is a list which will probably only end when hydrophobia itself is extinct. That there may exist a specific against the disease is incontrovertible; that no visible step has yet been made towards its discovery is also beyond question. The last contribution towards the discovery comes in the form of a communication to Prof. Gubler from Dr. Grzymala, of Podolia, a district of South-Western Russia, who has during an experience of twenty years found the Xanthum spinosum a never-failing specific. Rabies is common in that district, and in at least a hundred cases the efficacy of the plant has been tested. Like most of the other alleged specifics, it is powerless to combat the disease when once developed, being useful only as a prophylactic. Its physiological action appears to resemble that of jaborandi. He gives some startling instances, which are, however, less satisfactory on close examination than at first sight. Twelve years ago one of Dr. Grzymala's dogs was attacked with rabies, and bit an ox, a pig, a dog, a cat, and a crane. The ox, pig, and dog were treated with xanthum, and remained well. The crane (!) and the cat, which had not been treated, died—the one three days, the other eleven days after the bite. During the Crimean war a family, consisting of twelve persons, were bitten by a hydrophobic wolf. Six treated with xanthum remained well; while six others treated by cauterisation, Geoista tinctoria, &c., died hydrophobic, some at the end of twelve days, others at the end of two months. Six hounds were bitten by a dog with rabies, proved to be such by the death of the dog with characteristic symptoms, two days afterwards. Of the dogs which had been bitten, three were isolated and left without treatment, and died at the end of a fortnight with all the signs of rabies; while the three others were left at large, but received thirty grammes of powdered xanthum-leaves a day for three weeks, and remained, and still remain, perfectly well. A father and son were severely bitten, one of them in the face, by a dog, which died three days afterwards with all the symptoms of rabies. Xanthum was not administered until the death of the dog, and then given for three weeks. Both the persons bitten remained perfectly well. In no case quoted was cauterisation employed. Like the evidence in favour of other alleged specifics, the facts appear at first presentation to be of great weight. Experimental evidence from other hands ought soon to be forthcoming; for a quantity of xanthum-leaves has been sent to M. Gubler, and there is unfortunately never any lack of material, canine and human, in France on which observations may be made. The plant grows in Southern France, so that a sufficient supply should be forthcoming. We can only wonder that a drug of such alleged specific influence should have been in local use for twenty years, and not sooner have been communicated to the profession at large. There is room for doubt whether the disease was really hydrophobia. If it was, its form was more virulent than that in which it was commonly seen in this country; for it is unknown here for an animal to die in so short a time as three days after being bitten, and, on the other hand, it is rare for so large a proportion of those bitten to suffer as in some of the cases described.

Dr. M. G. Boase.—We cannot at present put our hand on such articles.

ERGOT IN PROLAPSUS UTERI.

To the Editor of THE LANCET.

SIR,—Having observed that ergot produced contraction in the sphincter vagina of a lady for whom I had prescribed it in a tonic mixture for menorrhagia, I determined to try it in prolapsus uteri with relaxed vagina.

On Jan. 19th an old patient of mine brought to me her sister-in-law, who was suffering some inconvenience from the presence of a winged pessary, which she had worn for more than a year on account of prolapsus uteri, and desired its removal. I took it away without much difficulty, and, as there was some vaginal irritation, advised soothing applications with mild aperients, and arranged to see her again on the 22nd—i. e., in three days. She visited me accordingly, and I explained to her my hope that medicine, with occasional rest in the horizontal position and alum lotion would enable her to do without any pessary for the future. I prescribed liquid extract of ergot, two drachms; tincture of bucha, half an ounce; sulphate of quinine, fifteen grains; dilute sulphuric acid, one drachm; water to six ounces: the sixth part to be taken twice a day. She called upon me again on the 24th, and the effect of the treatment for six days was thoroughly satisfactory. The sphincter vaginæ was in a state of chronic contraction, so that my finger could only reach the uterus by dilating the vagina in its whole length as embraced by the muscle. The uterus was in a perfectly natural position, and, so far as the touch indicated, perfectly healthy. The patient had not taken much rest, perhaps two half hours each day on the average, but she had employed the other means as directed.

Perhaps I may attribute more to the ergot than it deserves for her marked improvement. Perhaps others have noticed this effect of ergot before me; but, whatever may be the explanation or the experience, I am quite sure this plan deserves a trial, especially if, as in this case, there is also menorrhagia. I have already mentioned it to the assistant physician-accoucheur of one of our largest hospitals, who will commence giving it at once in cases of relaxed vagina and prolapsed uterus. When I hear the results of his experience, you will probably hear again from me.

Yours faithfully,

Canonbury-lane, 1876. HENRY BATEMAN.

*** We shall be glad to hear from Mr. Bateman or his friend the result of a larger trial of this treatment. The question arises whether, supposing such a contraction of the vagina to be produced as a rule in such cases, it will continue after discontinuance of the medicine. It is obvious that the constant administration of ergot might be a greater evil than the wearing of a pessary; but, any way, Mr. Bateman's case is interesting and suggestive.—ED. L.

PROFESSIONAL ETIQUETTE.

A CORRESPONDENT (*Mr. James Bunting*, of Tottenham) alleges a serious breach of professional etiquette under the following circumstances. He was attending "a lunatic patient" privately, when, requiring an attendant, he advised *the wife of his patient* to apply at an adjacent private asylum (Northumberland House, Stoke Newington). On calling the next day, the gentleman who complains to us found that the medical officer of the asylum had visited the patient, and under his advice the lunatic had been removed to that institution. We are not surprised that our correspondent should be annoyed. There was certainly some lack of courtesy on the part of the friends, who did not send to the medical man in attendance before the removal of the patient was determined upon. We cannot, however, condemn the authorities of the asylum. It was a mistake to refer the wife or friends of the patient to an asylum for an attendant. If a medical practitioner requires a skilled nurse or assistance of any kind, we cannot help thinking it is his duty to take direct measures, in his own name, to procure the aid he needs. If this had been done, the medical officer of the asylum would, doubtless, have communicated to our correspondent what he does not appear to know—namely, that very grave responsibility rests upon any practitioner who delays the removal of an insane patient to an asylum. We doubt whether the officials at the asylum would have been morally or legally justified in allowing a dangerous lunatic to remain at large without making serious representations to the friends of the peril in which the patient and those around him were placed. If the fact that a lunatic is retained in any unlicensed house becomes known to the relieving officer of a district, he must, *within three days*, cause such patient to be brought before a magistrate, on peril of a heavy penalty in default. Moreover, the first hours of an attack of mental disease are of the greatest moment to the issue of the case. Public and private interests and personal and social well-being, therefore, render it imperative to make the instant treatment of lunacy obligatory. We do not assert that it is impossible a case of this nature could be treated safely and successfully "at home," but if the attempt is made, it is the duty of any medical practitioner assuming the responsibility of such a procedure to assure himself that all measures essential for safety are complete, and, further, to see that it is understood how great the risk incurred really is. A medical man who simply recommends the wife of a lunatic to apply at an asylum for an attendant is not, in our judgment, entitled to complain if the medical officer consulted advise that the patient should be placed without delay under proper care and treatment in an establishment set apart for such cases and provided with all suitable appliances for safe custody and cure. The risk of leaving this common-sense counsel ungiven was too great to run.

Mr. A. Field.—Fees have been recovered, but not in precisely similar cases to those of our correspondent.

SACCULAR DILATATION OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—I do not think that anyone comparing the case I described in THE LANCET of October 30th, 1875, with that given by M. Gillette in your issue of the 6th instant, can come to the conclusion that they are "very similar cases." M. Gillette's communication is very valuable, describing as it does most thoroughly a somewhat unusual and not well-known form of vaginocele. But he admits his case to be one of mere dilatation of the urethra, just as ordinary cystocele is usually a dilatation of the neck of the bladder. The clinical features of the two cases are very different, and a tumour the size of an egg, as in my case, could hardly be described by the word "bosselure." The peculiar feature in my case, and which may have existed in M. Giliette's, though we are without the means of knowing, is that the saccular dilatation communicated with the canal of the urethra by a very small opening, only large enough to admit a No. 9 or 10 catheter. The difference between this case and that described by M. Gillette, is very much that which exists between an aneurism formed by rupture of the middle coat of an artery and one formed by dilatation of all the coats. Moreover, if the original report of the case be referred to, it will be found that the words used are: "Mr. Tait remarked that he had never met with a case like this, and he supposed that the sac must have been of congenital origin." I nowhere said that no parallel case had been recorded, though up to this moment I do not know of any such record. Cases of dilatation of the central part of the canal I have seen occasionally, but none requiring surgical interference; and for any bad enough to warrant operation M. Gillette's plan would be efficient. It is a modification of the operations of Bozeman, Simon, and others for cystic vaginocele. For my case it would have been useless.

I am &c.,

Birmingham, May 6th, 1876. LAWSON TAIT.

MEDICAL CONGRESS IN SPAIN.

IT would appear that the fashion of holding such meetings has reached Spain. A Congress was held at Seville from the 2nd to the 8th of April last, and was most successful. The second meeting is to take place in 1878 at Granada. Dr. Tubino, the editor of the *Andalucia Med.*, has been the great promoter of the gathering.

OMISSION: THE PRIMARY EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

WE omitted last week in the list of gentlemen who succeeded in passing the primary examination in Anatomy and Physiology the name of Mr. Henry Fraser Stokes, of University College.

Anti-Quack.—We fear nothing can be done in the matter until proprietors of newspapers refuse to receive advertisements similar to the one enclosed.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—I am bound to say that Mr. McGill, in his letter of April 22nd, has, however unintentionally, misrepresented my article on Hydrophobia in THE LANCET of April 15th.

Mr. McGill attributes to me that in the article in question, as a result of the deductions arrived at, I stated that all dog-bites should be freely cauterised; whereas I stated that, after bites of rabid dogs, excision was to be preferred whenever practicable. Influenced, however, by the fact, which I have more than once endeavoured to prove, that hydrophobia occasionally occurs after the bites of apparently healthy dogs, and corroborated as this fact has been by Mr. Fleming, I recommended cauterisation after the bites of healthy animals as the minimum of the measures to be adopted, and, as sufficiently protective or preventive (after the experience of Youatt in graver cases) to warrant or to justify its general adoption in the treatment of these ostensibly less important injuries.

Mr. McGill states that, theoretically, cauterisation is of no avail, and he arrives at this conclusion because he finds that "morphia after hypodermic injection manifests its action on the pupil within a minute of its administration, so it is evident that the virus received from the dog's saliva will be absorbed equally quickly." In this theoretical analogy Mr. McGill forgets that in hypodermic injection, in consequence of so small a puncture being made, the solution of morphia is prevented from escaping; whereas in many cases of dog-bite the immediate occurrence of bleeding after the injury either dilutes the virus until it is inoperative when absorbed in such minimised proportions, or washes a quantity of it out of the wound entirely. As some of the virus at times, doubtless, is unremoved by nature's process, the absolute necessity of either excising the part or of applying the actual cautery or caustics is imperative to prevent any further entrance into the system of the morbific germs; and although, as has been suggested, it may be possible that a small quantity of the virus may have been absorbed before the dog-bite has been seen by the surgeon, yet this circumstance, even if it could be discovered or recognised, would not exonerate the latter from endeavouring to prevent further absorption of the specific virus by one of the methods referred to. Indeed it is quite possible that in some cases the virus primarily absorbed would be carried from the system by the different emunctories; whilst any portion remaining in the wound with its vitality undestroyed might, and perhaps would, under certain conditions of health or of temperament, become a grave source of danger afterwards.

Rapid healing, apparently desired by Mr. McGill, certainly ought not to be the primary consideration in the treatment of dog-bites. What ought to be of infinitely greater importance is, either removal by the knife of the specific virus, or its destruction and that of the tissue in which it is imbedded by some suitable escharotic; the more severe preventive means being adopted in bites of animals known to be rabid, and the milder means where such a condition cannot be recognised.

I have now endeavoured to controvert Mr. McGill's theoretical objections as to cauterisation and excision, founded, as such objections are, on the principle of rapidity of absorption. I have included excision as one of the modes of treatment incurring Mr. McGill's disapproval, inasmuch as it will at once be recognised that, if there be any truth in the argument that it is unnecessary and useless to cauterise a dog-bite after the expiration of a minute from the time of the infliction of the injury, such objection applies equally to excision.

I will now refer to the three cases of hydrophobia mentioned by Mr. McGill, in which cauterisation of the dog-bites by nitrate of silver had been adopted. Mr. McGill adduces these cases as a practical exemplification of the inefficiency of cauterisation, and as proving the correctness of his theoretical objections. He does not state, however, and I presume he does not know, how cauterisation in each of these cases had been effected. I mean as to whether it had been done skilfully and in a painstaking manner by himself or some other surgeon; or whether by some incompetent person, simply applying the nitrate of silver over the orifice of a penetrating dog-bite, instead of within its cavity. I would suggest that, in some cases of failure in preventive treatment by escharotics, such failures are to be ascribed rather to the imperfect manner in which cauterisation is done than to the cauterisation itself. Before Mr. McGill brought forward these cases as a proof of the inefficiency of cauterisation, such information should have been forthcoming.

Mr. McGill's experience would appear to be quite opposed to that of Youatt, who, according to Watson, had seen more of the disease in man and animals than any other person then alive, and to have "operated with the caustic on more than 400 persons, all bitten by dogs, respecting the nature of whose disease there could be no doubt, and that he had not lost a single case." Uniform success like this is much at variance with the assertion of Mr. McGill, that cauterisation "does no good." Yet, however satisfactory such figures are, it should always be understood that, after bites by rabid dogs, excision, whenever practicable, in preference to cauterisation, should be adopted as being the more perfect method of removing both the virus and the tissues implicated. Erichsen suggests that if there be any doubt of the whole of the injured parts having been removed after excision, potassa fusa should be applied. He further recommends that where excision has not been primarily adopted, if the wound have already cicatrised, the bitten part should be excised at any time after the injury, provided the dog is known to have been or to have become mad. These recommendations, concurred in as they are by our most eminent teachers of surgery, may be said to be a satire on Mr. McGill's objections, which I may be pardoned for saying are illogical, inasmuch as, without even recommending an alternative plan of treatment, he would leave to "quacks and empirics" the only means hitherto known in any degree capable of preventing the development of an incurable disease—viz., by excision and caustic of some kind or other. These expedients may not have been invariably successful, and thus the imperfection of our art is manifested; but until science has at last revealed, which, doubtless, sooner or later she will do, the antidote or curative agent to be adopted in the treatment of a disease which has baffled human skill for so many centuries, it is not likely surgeons will ignore, at least for such reasons as those assigned by Mr. McGill, the only recognised measures, however imperfect, of preventing the development of a malady which, once generated, has always hitherto been fatal.

I remain, Sir, yours &c.,

Pontefract, May, 1876. HENRY MUSGROVE, M.D.

OFFICIAL NIGHT PRACTICE IN PARIS.

THIS very useful innovation has proved a great success. It will be remembered that the Municipal Council have caused lists of medical men willing to be called to patients in the night to be suspended in all the police stations. When assistance is required, the friends repair to the office, choose a medical man from the list, and are taken to his residence by a police officer, who also accompanies the doctor to the patient's house. For this visit ten francs are to be paid either by the sick person or the authorities, according to the patient's circumstances. From the 9th of January last to the 1st of May, 1180 such visits have been made; and out of this large number, nine patients only were dead when the doctor reached the house. The Municipal Council had allowed £400 a year to pay for such visits as were made to people unable to satisfy the demand of ten francs; but it has hitherto been found that very few have been in the latter category.

S. Gravity. — 1. Fifth Report of the Rivers' Pollution Committee. — 2. We are not aware that any good method has been described. The method suggested would be nearly worthless.

A. C. S.—St. Andrews University.

PUNISHMENT DRILL.

To the Editor of THE LANCET.

SIR,—Permit another "Head Master" to make a few observations on Punishment-drill, the introduction of which into public schools you advocate so strongly. You may not be aware that the experiment has been already tried at more than one school of recent foundation. I believe my friend Mr. Morris, the late head master of the Bedford County School, was fairly satisfied with its results there, and in this school we adopted it from the first as the usual method of punishment, alternating dumb-bells with the form which you recommend—"good steady extension drill." You have ably summed-up its advantages. I am sure you will allow me to point out the drawbacks to a too great and exclusive reliance upon it as a panacea.

1. It cannot be made a very strong deterrent, partly because but little ignominy can attach to an exercise that is generally considered manly. True, it may be rendered additionally irksome by breaking into the middle of playtime; but even then, unless the number of delinquents is so small as to give a sense of isolation, the healthful and harmonious movements are pretty sure to bring a kind of pleasure. I have often been half-amused, half-chagrined by unwitting spectators remarking that the boys seemed thoroughly to enjoy their drill.

2. It does not admit of gradation like "lines." More than forty minutes of smart drill would be cruel to the majority of boys, and yet this is scarcely equivalent to "a hundred lines" in point of time.

3. It cannot be easily worked in large numbers. On the average at least one boy in four requires some coercion or punishment in the course of the day; but a class of "dumb-bells" ought not to exceed thirty, while a company of extension-drill is unwieldy at fifty.

4. It is difficult, though by no means impossible, to find drill-sergeants who can manage troublesome boys.

On the whole, I think drill works admirably as the stock form of punishment; but there must be supplementary methods, for otherwise what coercion could one exert upon a wilful boy, who, being alive to the fact that one hour's drill is the utmost limit of punishment, might systematically choose to neglect work throughout the three hours daily devoted to "preparation"?

I notice that the *Globe*, in seconding your suggestion, incidentally deprecates the Continental punishment of solitary confinement. I am sure you will endorse this opinion; for my own part I know of no form of punishment liable to be attended with such baleful results, unless care be taken that the mind is fully occupied during incarceration.

I am, Sir, yours obediently,
THE HEAD MASTER.

United Services College, Westward Ho, N. Devon, May, 1876.

*** We think the most wilful boy would soon give in if all his play-hours for some weeks were devoted to drill. We never thought of dumb-bells; they are far too exhilarating, but recommended the extension drill, that waving of arms and touching of toes which was our especial abomination when at school. These should be carried on for forty minutes, then half an hour standing at ease, and then recommence till the school-bell rings. —ED. L.

Mr. T. Warner Lacey.—If a practitioner declines to meet in consultation a brother practitioner, he must not complain if he finds himself superseded by the practitioner whom he refuses to meet. Of course a general practitioner may refuse to meet another general practitioner in consultation; but we see neither propriety nor courtesy in such refusal. The note enclosed is not to be commended.

RINK ACCIDENTS.

To the Editor of THE LANCET.

SIR,—I can give your correspondent on the above subject some information with regard to our rink (the Royal Avenue), as I live next door to it, and have, I believe, been sent to in every case for which surgical assistance was required. The number of skaters on this rink since its opening (this is the twenty-second week of its existence), the manager informs me, is about 124,000. The accidents that have come under my notice are 14; and, allowing for a few that occurred when I was not at home, I imagine 20 would include the whole number—i. e., one to every 6200 persons entering the rink, of whom very few are merely spectators. I have no statistics of the percentage of accidents in other forms of amusement; but I should suppose that most of them are attended with at least as great a risk. What the more remote results are I must leave for others to say, and I hope some information will be forthcoming on the subject. The cases I saw were:—Fracture of radius, 6; fracture of tibia, 1; fracture of olecranon, 1; bruising of external condyle, 1; sprained ankle, 2; scalp wound, 1; bruised finger (second phalanx), 1; dislocation of radius, 1. Yours faithfully,

King's-road, S.W., May 9th, 1876. J. FOSTER PALMER.

A SENSIBLE PRECAUTION.

WHEN lunar caustic is used in the oral cavity, and towards the tonsils and larynx, fears may be entertained that the stick may break and cause dangerous symptoms. To make such an unpleasant accident impossible, Dr. Mettenheimer places the caustic in a little bag of gauze, through the meshes of which the former acts completely, the escape of the stick being effectually prevented. Of course the gauze should be changed at each cauterisation, as the meshes are liable to get obstructed by moisture, and even to be destroyed by the caustic.

Dr. Wardell.—Our correspondent's letter was overlooked. We will endeavour to comply with his request.

HAY ASTHMA.

To the Editor of THE LANCET.

SIR,—In *Nature* of May 14th, 1874, a letter was published from Professor Helmholtz, giving an account of the benefit he derived from the local application of quinine injected into his nostrils during an attack of hay fever. He was led to try this remedy from discovering vibrionic bodies in the nasal secretion during an attack, and being aware of the poisonous action of quinine upon infusoria. Immediately on reading this I sent the following prescription to a lady who was a dreadful martyr to hay fever:—Quinine, twelve grains; dilute hydrochloric acid, thirty minims; water to six ounces; and add bicarbonate of soda, q. s., to make a neutral solution. The directions were to add one ounce of hot water to two ounces of lotion, and with a ball syringe to inject the nostrils at the first dawn of an attack, doing this about three times a day for a few days. At the end of the summer of 1874 she wrote, saying she had never been so free of her enemy, having been able to cut short several attacks. During the summer of 1875 a similar immunity she solely attributed to the injections, which were more strictly tested, as the previous year she went yachting with her husband, as had been her custom, but this year she had remained on land with impunity.

I have tried the quinine injections with benefit in another case; but the attacks were nothing like so severe as in the case of the lady I mention.

I am, Sir, yours truly,
Sudbury, Suffolk, May 9th, 1876. J. SINCLAIR HOLDEN, M.D.

To the Editor of THE LANCET.

SIR,—"Inquirens" may find benefit in using "Professor Binz's remedy for hay asthma." It may be obtained at Savory and Moore's, and consists of a bottle containing a solution of quinine, the cork being provided with a syringe, by which the liquid is to be injected up the nostrils; the whole being contained in a neat little boxwood case. Yours truly,
Warlingham, Surrey, May, 1876. T. FRANKLIN LLOYD.

THE WET-NURSES' OFFICE IN PARIS.

FORMERLY this office was under the superintendence of the Hospital Board, and parents were supplied with wet-nurses from the country, who came to Paris for the purpose of being hired. The office has been abolished owing to the large mortality of the infants taken away by the nurses. The hospital authorities now confine themselves to the supervision of foundlings, and are empowered to make grants of money to the mothers who consent to nurse their children.

Adelphos.—Certainly not.

PHOSPHORUS PILLS.

To the Editor of THE LANCET.

SIR,—Whatever the merits or demerits of pil. phosphori, B.P., it is certain that it has failed to obtain the approval of any large number of prescribers, and is not likely ever to be generally used. In the absence of any published formula of a thoroughly satisfactory nature, we suggest the following, which, to avoid confusion with an advertised nostrum for which we believe it to be an efficient substitute, we propose to call "Pil. Phosphori cum Sapone."

℞ Phosphori, gr. ij.
Carbon. bisulphid., m. x., vel q. s.
Solve.
Pulv. saponis dur.
„ guaiaci resin., aa gr. xxxv.
Glycerin., gtt. xij.
Pulv. rad. glycyrrhizæ, gr. xij., vel q. s.

Ut fiat massa, gr. c. To be divided into pills of the strength required, and varnished or "coated" in the ordinary way.

The mass thus formed is of good consistence, easily manipulated, readily miscible with other remedies, and, what is most important, readily soluble. It is hardly necessary to add that the very volatile bisulphide soon evaporates. Yours &c.,
Plough-court, E.C., May, 1876. ALLEN AND HANBURYS.

A Constant Subscriber.—An American practitioner would have to acquire by examination a diploma from one of the examining bodies in Great Britain. He would probably be admitted to the ordinary examinations in this country on producing certificates of his attendance on lectures and hospital practice abroad.

Mr. Carr, (Huddersfield.)—Such a question cannot be treated in the space at our disposal in this portion of THE LANCET.

DETECTION OF STONE IN THE BLADDER.

To the Editor of THE LANCET.

SIR,—In his short but useful and well-illustrated lecture on the "Detection of Stone in the Bladder," Mr. Teevan does not include in his list of the causes of failure the one which I happen to have seen most frequently in operations—the examination of the patient with his shoulders lying higher than his hips. Two stout cushions under the latter will often precipitate a stone from its lair behind the prostate into the fundus, and render its discovery immediate. Very possibly an expert in writing would assume that this was done, and therefore omit to mention it; but one less experienced in reading or operating might overlook the point, and would have plenty of precedents for doing so. Yours faithfully,
Maidstone, May 3rd, 1876. STEPHEN MONCKTON

THE NEW LYING-IN HOSPITAL OF PARIS.

We lately alluded to the plans submitted to the authorities for this establishment, and from recent communications to the journals we find that especial care has been bestowed on the means of preventing the spread of epidemics. There will be five wards, with eight beds each, for parturient women, each bed commanding seventy cubic yards of air. Separate rooms will be provided for the infantile laundry. The lying-in wards will be surrounded by court-yards and gardens, so as to ensure perfect quiet. Special wards will be set apart for such cases as present complications, and isolated rooms for cases of puerperal fever. Every accommodation is provided for the nurses, the pharmacy, and the governor; nor are the lecture-room and museum forgotten. Altogether the establishment will present every desirable guarantee.

Dr. Hamilton Rose. — Our correspondent's second surmise is correct. Although it is thought that many of the sketches had a basis of prosaic truth, the greater part were fictitious.

SUGGESTIONS FOR TREATMENT OFFERED.

To the Editor of THE LANCET.

SIR,—In reply to "X. Y. B.'s" letter of inquiry in your issue of May 6th, I beg to say I had a case some short time since of a man, who suffered for about a month from symptoms somewhat similar to those your correspondent describes in the case he has at present under treatment, and he seemed to be in perfect health in every other respect, and no reason to suspect any tendency to any disease whatever. The treatment I found most beneficial in his case was an alkaline mixture and some aperient pills, with a lotion as follows:—Chlorate of potass, two drachms; glycerine, half an ounce; water to six ounces.

Yours very truly,

Hoyland-Nether, Yorks, May 8th, 1876. WM. RITCHIE, M.D.

To the Editor of THE LANCET.

SIR,—In answer to "X. Y. B.," I think he will find the following afford immediate relief:—Melt paraffin, oil of theobrome, and oil of sweet almonds (proportions of each not important), and when liquid introduce into a heated Wedgwood mortar. To every ounce of the foregoing add a drachm of salicylic acid, and triturate until cold, when each ounce should occupy the space of two ounces of ordinary ointment. This ointment should only be used when the irritation is felt. I have found it also an infallible external application for pruritus after all others have failed.

Yours faithfully,

Buxton, May 10th, 1876. J. W.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. G. Johnson, London; Dr. Burdon Sanderson, London; Mr. J. Hogg, London; Dr. Bucknill, Rugby; Mr. Hillis; Dr. F. Robertson, London; Dr. Hill, Birmingham; Mr. Hookham, Birmingham; Mr. R. Harrison, Liverpool; Rev. J. A. Hatchard, St. Leonards; Dr. Evans, Cardiff; Mr. J. M. Morris, London; Dr. Brown, Sheffield; Messrs. Bell and Bradfute, Edinburgh; Dr. Blanc, Bombay; Mr. Roberts, Baroda; Dr. Gramshaw, Gravesend; Mr. Naden, Sheffield; Mr. Morris, Swansea; Dr. Stainthorpe, Hexham; Dr. Davis, Newport; Mr. Weaver, London; Dr. Muscroft, Pontefract; Mr. Byrne, London; Mr. Jeffreys, Chesterfield; Messrs. Bernard and Co., Leith; Messrs. Kinmond and Co., Leamington; Dr. Bayes, London; Mrs. Damont, Fakenham; Mr. Brown, Brighton; Mr. Shaw Lefevre, London; Mr. Meads, Chichester; Messrs. Allen and Hanburys, London; Mr. Beaufort, Oxford; Mr. Jones, Walkden; Mr. Carr, Huddersfield; Dr. O'Neill, Lincoln; Mr. Ellis, Willingham; Mr. Franklin, Leicester; Mr. Turner, Glasgow; Mr. Ingpen, London; Dr. Cayley, London; Dr. O. Will; Mr. R. Jones; Mr. Rowland, London; D. J. F. Payne, London; Mr. Bunting; Mr. Hobgood, London; Mr. Stewart, St. Ives; Dr. Harvey, Colchester; Mr. Lawson, West Riding Lunatic Asylum; Dr. Fisher, Colchester; Dr. Major, Wakefield; Mr. Lloyd, Warlingham; Dr. Talbot, Poplar; Mr. Markham, Northampton; Dr. Hitchcock, Lewisham; Dr. Charteris, Glasgow; Mr. Morgan, London; Mr. Willmore, Stockbridge; Mr. Newman, Granville; Dr. Waterworth, Newington; Mr. Humphreys; Mr. Ellis, St. Ives; Mr. Hughes, Pendlebury; Mr. Ferguson, Bolton; Mr. Stubb, Leeds; The Director-General of the Medical Department of the Navy; C.; A Constant Subscriber; Impromptus; L.S.A.; Beta; A Fourth-year Middlesex Student; Boston Correspondent; W. D., Colney; The Registrar-General of Edinburgh; The Registrar of the College of Physicians; M. H.; A. C. S., Dorchester; Fiat Justitia; A Northern; The Directors of the South Kensington Museum; Alpha; H. B., London; Doctor; F. C. K.; The President of the Obstetrical Society; Progress; X.; The Medical Officers of the Leeds Small-pox Hospital; M.R.C.S.; Medical Superintendent; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. J. Fisher, Glasgow; Mr. Howse; Dr. Moorhead, Derby; Mr. Walker; Dr. Waters, Oakhampton; Dr. Drummond, Oldham; Mr. Roberts, Walsall; Mr. Cave, London; Mr. Phelps; Mr. Clark, Whitchurch; Mr. Brown, Manchester; Dr. Hatchard, St. Leonards-on-Sea; Mr. Chapman; Mr. Rose, Stornoway; Mr. Calcott, Sedgefield; Mr. Seymour, Coventry; Mr. Coulson, Birmingham; Dr. Gill, Folkestone; Mr. Browett, Coventry; Messrs. Sturrock and Miln, Dundee; Mr. Oldham, West Hartlepool; Mr. Cooper, Bolton; Messrs. Schacht and Co., Clifton; Mr. Mills, Thetford; Mr. Southam, Brighton; Solicitor; Special, Wigglesw'ade; Gayite, Hampstead; R. V. C.; A. U. L., Pontypridd; G. P., Uppingham; Senex; C. D., London; A. L., London; M.O., Dartmouth; Surgeon, Bridgwater; J. M. E.; M. D., Margate; Beta, Cork.

Wiltshire, Newcastle Chronicle, Brett's St. Leonards and Hastings Gazette, Western Morning News, Colonies, East London Observer, Birmingham Morning News, Surrey Advertiser, Cork Constitution, Sheffield Evening Star, Manchester Guardian, Macclesfield Courier, Glasgow Herald, and *Isle of Man Times* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, MAY 18TH, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
May 12	30·78	E.	40	52	90	63	40	...	Hazy
„ 13	30·26	E.	42	47	91	56	42	...	Overcast
„ 14	30·26	E.	42	47	91	50	42	...	Cloudy
„ 15	30·12	E.	45	48	92	53	43	...	Overcast
„ 16	30·07	E.	45	48	95	60	45	...	Overcast
„ 17	30·17	E.	46	49	82	54	45	...	Overcast
„ 18	30·30	E.	47	52	93	59	41	...	Cloudy

Medical Diary for the ensuing Week.

Monday, May 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, May 23.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Broadbent, "On Ingravescent Apoplexy."—Dr. Galabin, "On the Causation of the Water-hammer Pulse as illustrated by the Graphic Method."—Dr. Sydney Ringer, "On the Bufo Sempervirens, with reference to the true Nature of Tetanus."

Wednesday, May 24.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, May 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, May 26.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Barwell: Singular Result of Excision of the Knee in a Child (the Patient will be exhibited). — Mr. Geo. Brown, "On a Case of Amputation of the Thigh for Acute Necrosis of the Tibia and Suppuration of the Knee-joint in an Infant nine months old" (the Patient will be exhibited).—Dr. Dudfin, "On a Case of Tumour of the Corpora Quadrigemina."—Dr. Pearson Irvine, "On a Case of Diphtheritic Paralysis simulating Extensive Lung Disease." — Mr. Teevan, "On a Case of Traumatic Stricture with numerous Fistulæ Cured by Internal Urethrotomy."—Dr. Wolston and Mr. Maunder, "On a Case of Intestinal Obstruction."

Saturday, May 27.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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